CULTURAL ACTIVITY AND MARKET ENTERPRISE: A CIRCUMPOLAR COMPARISON OF REINDEER HERDING COMMUNITIES AT THE END OF THE 20TH CENTURY

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ABSTRACT

Reindeer herding throughout the circumpolar North is in decline. Investigating this decline, this dissertation takes a comparative approach with a focus on four case studies: the Chukchi of Chukotskii Peninsula, the Iñupiat of the Seward Peninsula, the Saami of the Kola Peninsula, and the Saami of Finnmark. Because various rates and types of decline are occurring in these different cases, a comparative method leads to a systematic analysis of how patterns develop in the practice of contemporary reindeer herding, both locally and globally. Comparing and contrasting the trajectories of declines in reindeer herding identifies and explains the dimensions of specific local-global processes, and situates them in wider contexts. These dimensions include economic incompatibilities, ecological stresses, and power inequities.

By focusing on changes in reindeer herding over the last decade, this study reveals the effects of the incorporation of reindeer herding into the global economy, which is heavily dependent on existing infrastructure. This study also demonstrates the social position of reindeer herders and the cultural meaning of reindeer herding to the herders themselves. The willingness of regional and national governments to subsidize herding, and to ensure its survival through consistent access to pastures, is critically important to the success of reindeer herding as a productive agricultural enterprise. Furthermore, changing ecological factors potentially threaten reindeer herding as a subsistence activity. The consequences of decline, then, are explained through the identification

of decline-inducing factors, such as ecological change, political vagaries, and the inappropriateness of reindeer herding as a capital-based enterprise under existing conditions of market and transportation infrastructural development.

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CHAPTER 1

REINDEER HERDING AND GLOBAL CAPITALISM

INTRODUCTION

Reindeer herding in the circumpolar North has undergone rapid and irreversible changes over the past fifteen years. Whether or not reindeer herding will continue as a viable economic and cultural practice, either as part of a local indigenous economy or as a capital business enterprise, remains uncertain. Naturally, reindeer herding in any one part of the circumpolar North differs in many respects from reindeer herding in other regions of the North. Not only are herding practices variable, but so are ecological and political conditions, and consequentially, economic conditions. In addition, reindeer herding is situated in a distinctive social space in each culture, leading to different concepts of symbolic representation of meaningful events or situations.

Reindeer herding throughout the circumpolar North is in decline, though in different ways. This dissertation explains why, focusing on the period from the collapse of the Soviet Union to the present, the time when reindeer herding worldwide experienced decline. In this chapter, a brief background to reindeer herding in the case study regions is provided to place reindeer herding in a historical context. Including a brief historical account of the basis of relations between reindeer herders and the 'outside world' (Khazanov 1983), this chapter will focus on the

particular experiences of the populations in each of the four case studies. As well, the place of reindeer herding in relation to the wider world, accounting for regional and global pressures of change, will be addressed within the context of capitalism. A review of previous work foregrounding the decline of reindeer herding in the contemporary world and issues of decline which are relevant to the case studies is also included.

Reindeer herding is an economic activity practiced throughout the Arctic with particularistic cultural dimensions and which is critically important to many indigenous peoples of the circumpolar North. About 60,000 people, including 20-25 ethnically distinct groups of indigenous people, are employed in reindeer husbandry. The total number of domesticated reindeer in the circumpolar North is approximately two million. Throughout this region, reindeer herding is suffering a decline or diminishment of scale, especially in eastern Russia and western Alaska. In Scandinavia and western Russia, reindeer herders and herds are faring much better and have endured recent sociopolitical changes with fewer disruptions.

This dissertation seeks to investigate the issue of the decline, or diminishment, of reindeer herding through the investigation of four case studies situated on opposite sides of the circumpolar North. Because of the differences in the regional viability of reindeer herding in the post-*perestroika*[1] era, a global perspective of reindeer herding must be taken.

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[1] *Perestroika*, or "restructuring," refers to the period initiated by Mikhail Gorbachev in the late 1980's during which government and economic institutions were radically reformed.

A global perspective is necessary when looking at an institution, or collection of institutions, which ultimately participates in the global capitalist market. A comparative approach provides a basis for comparing the variables relevant to the institution of reindeer herding as an interconnected global phenomenon which has endured significant changes as a traditional economy. This global perspective enables such a comparative approach to traditional reindeer herding systems, and here I focus on four circumpolar regions as case studies.

The four regions chosen as case studies include Finnmark *Fylke*[2] of the Kingdom of Norway, the Russian Federation's Kola Peninsula (Murmanskaia *Oblast'*[3]), the Chukotskii *Raion*[4] of the Chukotskii *Avtonomnii Okrug*,[5] and the Seward Peninsula of Alaska, United States. Therefore, this study includes two 'macroregions' which contain two 'microregions' each. To enable easier reference, the two macroregions will be referred to as the 'South Barents Shores,' including the Saami of Finnmark and the Kola Peninsula, and the 'Bering Strait Peninsulas,' including the Chukotskii and Seward Peninsulas. Regionally, this allows for the comparison of two reindeer herding areas, in each of which two

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This process eventually led to the 1991 dissolution of the Soviet Union and the independence of the Russian Federation and the other former Soviet republics.

[2]*Fylke*, or "county," is the national political subdivision within the Kingdom of Norway.

[3]*Oblast'* is a political subdivision of the Russian Federation, usually translated as "province."

[4]*Raion*, or "district," is a subdivision of a larger political region (such as an *oblast'*) within the Russian Federation.

[5]*Okrug* is a political subdivision of the Russian Federation, usually translated as "region"; *Avtonomnii Okrug* is a self-governing area within the Russian Federation.

very different political or cultural systems prevail. This enables an ecological comparison of the two focus areas of the same region apart from and in relation to existing sociopolitical systems. Discussion will proceed from west to east beginning in Finnmark, then to the Kola Peninsula, then to the Chukotskii Peninsula, and finally to the Seward Peninsula.

This dissertation will reveal through these case studies the particular aspects of larger trends in reindeer herding in the circumpolar North, and the past and potential future consequences of these trends. A study such as this has not been done before, and it will contribute to an understanding of the local factors which influence the situation of contemporary reindeer herding and its increasingly global connections. By comparing four different reindeer herding societies from three ethnic groups within two broad geographic regions encompassed by three nation-states, local, regional, and global trends are revealed. This chapter will provide the framework for the rest of the dissertation, and relevant topics will be discussed from a circumpolar perspective, with limited reference to the case studies, which are presented in detail in the following chapter.

It should be noted here that the Old World and New World terminology differ when referring to 'untamed' reindeer. In Europe and Asia, untamed reindeer are termed 'wild reindeer,' while in North America untamed reindeer are termed 'caribou.' These terms will be used consistently as described above to refer to untamed reindeer, or both will be used when making a circumpolar reference. It should also be noted

that though tame, reindeer are not actually domesticated, which implies a change through artificial selection.

PROBLEM DEFINITION AND CENTRAL ARGUMENT

The central problem addressed by this dissertation is how to explain the decline in reindeer herding throughout the circumpolar North, as well as the variations in that decline from region to region. Specifically, the role of reindeer herding as an integral part of a particular culture will be analyzed in conjunction with the significance and viability of reindeer herding as a capital-based enterprise. This situation reflects the reality of reindeer herding as an economic enterprise unavoidably tied into a global market, specifically the global market for reindeer meat and antler products. These markets, like all global capital markets, fluctuate based on the condition of regional and national economies, and their success is inherently tied to the presence or lack of facilitating infrastructure.

In this dissertation, the four case studies demonstrate the problem of the variable change resulting in the reduction and decline of reindeer herding, each of which is situation ally specific. Therefore, this dissertation takes into account ecological, economic, and political changes from a comparative perspective, utilizing ethnographic data to provide a broad temporal framework situated in a post-Cold War context. To understand the contemporary situation of reindeer herding it is also necessary to consider the historical preconditions from which the current

situation emerged. Each case study will consider the historical relevance of reindeer herders both as local communities and as members of a larger nation-state (or states), to evaluate the issue of reduction in reindeer herds and products.

While the temporal focus of this thesis is approximately the past fifteen years (from *perestroika* to the present), many current conditions and problems have their origins in the period of the Cold War era or earlier. These conditions, especially in the Russian Federation, not only affect reindeer herding among herding peoples in Russia, but impact the global market for reindeer products as a whole. Since no reindeer herding society has ever existed in isolation, it is relevant to analyze the regional and global sociopolitical context in which reindeer herding occurs. Finally, by understanding the nature of the relationships between reindeer herding communities and the 'outside world,' influences from outside the local reindeer herding community can be identified and evaluated in terms of culture change and the diminishment of reindeer herding throughout the circumpolar North.

What is Decline in Contemporary Reindeer Herding?

'Decline' in the context of reindeer herding and this dissertation refers to a number of issues. Decline (or reduction/diminishment) refers to the decrease in the number of animals, the number of herders, income, and/or the amount of pasture being used for reindeer herding. This has cultural-symbolic implications, too, resulting in the lower

frequency of participation in the practice of reindeer herding and thereby in a reduction in the generational reproduction of herding knowledge. This, unavoidably, leads to changes in culture, as many former or potential reindeer herders are forced to seek other economic pursuits. As well, 'decline' indexes economic aspects, such as in the production of reindeer products and in declining profits. This, necessarily, includes such issues as cost of production, and access to processing, transportation, and marketing infrastructures. The table below provides initial comparative data concerning reindeer herding in the four case-study regions:

Table 1. Initial Comparative Data as of 2000.

FACTOR	Finnmark	Kola Pen.	Chukotka	Seward Pen.
General conditions	relatively stable	increasing stability	relatively unstable	relatively unstable
# of Herded Reindeer	~115,000	~300,000	~85,000	~9,500
Market value (meat)	~US$2-4/kg	~US$1-3.5/kg	~US$1-3.5/kg	~US$2.4/kg
# of Wild Reindeer	0	~7,000	~159,000	~440,000

'Decline,' then, refers to the diminishment of reindeer herding activities as lifeways, reduction in the scale of systems of production, and decrease in the profitability of reindeer products.

Literature Review of the General Decline of Reindeer Herding in the North

Most extant literature about the subject of the decline of reindeer herding stems from the post-Soviet period, a time of general decline in the scale and productivity of reindeer herding throughout the circumpolar North. This literature review focuses on reindeer herding as a socioeconomic system and as a circumpolar institution in general, especially as is relevant to issues of decline. While an overview of previous literature on reindeer herders and reindeer herding is presented, particular focus is placed on the discussion of reindeer herding as an adaptive strategy, a strategy which has taken many forms over time and between populations. This is critical to the understanding of the trends and consequences of the diminishment of the scale of reindeer herding in the contemporary period.

Reindeer herding has been studied in detail from many perspectives by a wide range of researchers including adventurers, anthropologists, biologists, bureaucrats, economists, historians, journalists, librarians, missionaries, school teachers, and veterinarians. In this thesis, however, focus will be placed on academic investigations of reindeer herding. This necessarily excludes the many publications that provide only cursory accounts of reindeer herders, herding, changes, and origins, and which is largely limited to secondary encyclopedia-like entries in other texts, or as a part of travel literature.

Reindeer herding has been studied academically since the end of the nineteenth century, including the famous Jesup North Pacific expedition in which Waldemar Bogoras participated and about which he wrote (1902, 1909, 1929, 1931). Bogoras's descriptions of reindeer herding among the Chukchi (1909), especially, provided a detailed account of reindeer herding in the early twentieth century. These early works attempted to understand the status of peoples living in the Arctic from a social evolutionary perspective, which was a typical approach of the time. From these early studies of reindeer herding societies, a rapidly increasing bibliography of works relevant to the study of reindeer herding has emerged.

Many of the early studies on reindeer herding focus on questions of origin, descriptions of activities, and the status, quality, and exchange of reindeer resources including works by H. H. Prince Roland Bonaparte (1886), D. Dmitriev (1925), Aleksandr Engelhardt (1899), A. H. Keane (1885), A. C. Ross (1915), Johannes Schefferus (1672), Albert Seeman (1933), K. P. Wiklund (1919), Lillian Zeh (1911, 1913), and Dmitri Zelenin (1938), among others. These descriptions generally provide limited information about the meaning of institutions or effects of change in reindeer herding, and almost never from an indigenous perspective. Furthermore, much of this early literature on reindeer herding is oriented towards assimilation perspectives, generally evaluating a herding population and its indigenous economy in terms of its value to the overarching nation-state.

The assumption in these writings is that culture-change has unavoidably destructive effects on indigenous peoples, especially when diffused from the West. Reindeer herding societies, however, continue as reindeer herding societies to the present, albeit in modified form, regardless of the cultural stresses that accompany change. While this is evident when speaking to reindeer herders about their vocation and culture, reindeer herders themselves, it seems, have rarely written about reindeer herding, though it is recognized that such an endeavor is neither immediately advantageous nor necessary from a herder's perspective.

From an academic perspective, though, much has been written and from many different approaches. One of the earliest post World War II comprehensive studies of reindeer herding and the societies of reindeer herders was carried out by Nikolai Volkov (1946) in the Soviet Union. His writings on the Saami, the subject of most of his reindeer herding studies, began in the late 1930's and are primarily descriptive in nature. Nevertheless, many aspects of Kola Saami culture and its inseparable dependence on reindeer herding is researched and discussed. An excellent follow-up of these studies is provided by Tatiana Luk'ianchenko (1971) who focuses on the material aspects of Kola Saami culture, and by A. A. Kiselev and T. A. Kiseleva (1987), who focus on the effects of history and economic change on Saami culture. It should be noted that, with few exceptions, Soviet and Western writers were working in isolation, only rarely meeting in the occasional reindeer or caribou symposium. Soviet sources tend to be descriptive and focus on material

culture and economy, while Western sources evaluate the situation of reindeer herders from a less Marxist, more post-colonial, increasingly global perspective (see Reindeer Herders as 'Fourth World Peoples' below).

In more generalized studies of reindeer pastoralism, a few writers have been particularly helpful in describing the rise of the pastoral and nomadic ways of life, including reindeer pastoralism. Ingold's most widely acclaimed work, *Hunters, Pastoralists, and Ranchers: Reindeer Economies and their Transformations* (1980), has proven useful from economic, comparative, and social change perspectives in particular. Here, Ingold describes the process, at least among many Saami groups, of trends of institutional change within reindeer herding from conditions of pastoralism to ranching. Equally influential, Anatoly Khazanov in *Nomads and the Outside World* (1983) described and classified in detail the rise and forms of pastoralism. John Galaty and Douglas Johnson in *The World of Pastoralism: Herding Systems in Comparative Perspective* (1990) edited a series of essays on various issues of pastoralism within ecological and environmental categories. Thomas Barfield in *The Nomadic Alternative* (1993) similarly discussed nomadic pastoralism and its variations with a focus on 'key' animals and carrying capacity of land.

In the 1970's, a proliferation of reindeer herding studies emerged from many disciplines. Especially important in anthropology and relevant to this study was Robert Paine's *Animals as Capital: Comparisons among Northern Nomadic Hunters and Herders* (1971) where different strategies of hunting and herding reindeer were compared. These strategies, including a particular concern with herd management among

reindeer herders, led to a focus on variations among the Saami (1972) and ultimately to the ground-breaking work *Reindeer and Caribou* Rangifer tarandus *in the Wild and under Pastoralism* (1988) in which Paine provides a comparative ecological perspective on the interactions of humans and reindeer. Another important comparative perspective in reindeer herding studies that also addresses the issues of culture-change and reduction of scale is Hugh Beach's *Comparative Systems of Reindeer Herding* (1990), in which herding techniques and consequences are described throughout the circumpolar North.

These works were preceded, however, by Arthur Spiess's *Reindeer and Caribou Hunters: An Archaeological Study* (1979) in which the ethology and biology of reindeer are considered within an ethnographic and archaeological perspective. A similar work in Russian was provided in *Severnyi Olen'* (Northern Deer [Reindeer]) by E. Syroechkovskii in 1986. Other biological or ecological approaches to reindeer herding have been common since Spiess's work, including David Anderson (2000b), Myrdene Anderson (1978, 1996), Ernest Burch (1972, 1991), Joseph Fox (1998), Tim Ingold (1992), Igor' Krupnik (1992b, 1993), Robert Paine (1988), Semen Pomishin (1990), E. Reimars (1972), Anders Skoncroft (1998), and Piers Vitebvsky (1992), among others.

The work of Tim Ingold on reindeer pastoralism, particularly among the Saami, has been extensive (1976, 1978, 1980, 1992) and has tended to focus on culture change, and therefore institutional change, among the Saami. The discussion of culture change among reindeer herders is also well described in the important case study by Pertti Pelto, *The*

Snowmobile Revolution (1973), which focuses on the cultural impacts of snowmobiles and other machinery among the Skolt Lapps of Finland. Other important works on culture change among the Saami include Nils-Erik Hansegård's *The Transition of the Jukkasjärvi Lapps from Nomadism to Settled Life and Farming* (1978) and Hugh Beach's *Reindeer Herd Management in Transition: The Case of Tuorpon Saameby in Northern Sweden* (1988). Both are case studies from northern Sweden that focus on the changes of reindeer herding institutions, their redefinition and 'rationalization' within the context of the nation-state, and the abandonment of reindeer herding for other vocations.

This issue of culture change continues to be an important topic in reindeer herding studies (David Anderson 2000a; Myrdene Anderson 1986; Leonid Baskin 2000; Jens Brøsted 1987; Joseph Fox 1998; S. Galkin 1996; Patty Gray 1997, 2001, 2002; Johan Högman 1990; Tim Ingold 1978, Anna Kerttula 2000; Yulian Konstantinov 2000, 2002a, 2002b; Igor' Krupnik 1993; Gail Osherenko 1995; Golovnev and Osherenko 1999; Aleksandr Pika 1999; Drew Shane et al. 1998; James Simon 1998; Tom Svensson 1987; Sevyan Vainshtein 1980; Piers Vitebsky 1989, 1990). This investigation of the reduction and decline of reindeer herding practices, then, compliments these investigations of culture change.

The Emergence of Large Scale Reindeer Herding

Natural climatic changes, coupled with technological innovation, likely enabled the emergence of pastoral nomadism as an adaptive strategy. The rise of the pastoral economy naturally took different forms in different regions, and much diffusion of ideas and techniques likely occurred. The emergence of large-scale reindeer herding and its process of dispersal throughout the Eurasian North was, as Krupnik (1993: 160) states, "the most important turning point in the cultural history of the Native peoples of the Eurasian Arctic." The rise and adoption of large-scale reindeer herding represents an economic revolution from resource extraction to resource production.

Reindeer pastoralism probably originated from the reindeer hunt, though reindeer breeding may have been introduced into the western and central regions of Eurasia by Samoyed cattle breeders from southern Siberia as early as a thousand years ago (Krupnik 1993: 161). The Altai-Sayan mountain-region of central Asia seems to be the origin of current reindeer stock (Vainshtein 1980: 120-121). Herding did not occur on a large-scale, however, before about five hundred years ago. Elsewhere, reindeer pastoralism may have emerged from other forms of central Eurasian steppe pastoralism, though it is possible that an independent development based on regional demands for skins occurred in Fennoscandia among the Saami (Khazanov 1983: 114).

In the special case of Fennoscandia, it seems that reindeer herding, or at least the control over groups of wild reindeer, existed in

Scandinavia sometime before A.D. 892, when the Norse *jarl* (earl) Ottar (Old English: *Othere*) sent a letter to King Alfred the Great of Wessex (southwestern England) which included an account of his realm, known as *Hålogaland*, in the *Anglo-Saxon Chronicle* during the time of Alfred the Great (r. A.D. 871-899). This report revealed the Finnmark Saami as hunters, fishers, and gatherers, but Ottar claimed to own six-hundred reindeer, including six domesticated decoys used by Saami subjects for reindeer hunting. During this period and beyond (ca. A.D. 800-1700) the reindeer hunt became increasingly important and was greatly expanded to fulfill the requirements of tax and trade (M. Anderson 1978: 664). It was at the beginning of this period that the first evidence of reindeer domestication arises in Fennoscandia.

Perhaps the only truly mono-specialized pastoral nomadic adaptation, the reindeer hunters and later herders of northern Eurasia traditionally focus on the reindeer as the sole livestock resource.[6] This is also unique due to the likely emergence of reindeer pastoralism from reindeer hunting, rather than from an agricultural base. Reindeer herders characteristically practice a particularly 'pure' form of nomadism because of the limited potential for agriculture in their habitats. However, hunting and/or fishing usually occur in addition to the maintenance of herds.

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[6]It should be noted that in some areas, the encroachment of agricultural economies has led to the inclusion of other livestock within the herding regimes of traditional reindeer herding economies. Notable examples include the herding of both horses and reindeer among the Sakha (Yakuts) of central Siberia, and the widespread husbandry of cattle.

While the economy of reindeer *herders* is generally believed to have disrupted the economies of reindeer *hunters*, the former's emergence was likely a result, in some areas, of a decline in wild reindeer populations (Beach 1990: 260-261). Especially among the Saami, the reaction to these dwindling populations encouraged a switch to reindeer pastoralism to preserve the reindeer as an economic resource and to continue to meet economic demands for reindeer products, both internally and externally. In all areas, whatever the origins, *large-scale* reindeer herding emerged largely in reaction to the demands of outside markets.

Reindeer Pastoralism in the Contemporary World

Because this dissertation focuses on four case studies, most of the information provided is specific to these situations. Nevertheless, all are part of a wide, circumpolar region in which reindeer herding and caribou hunting are commonplace. An overview of the current state of reindeer herding in the circumpolar North is useful, then, to place these case studies in a regional and global perspective. In the rapidly changing political, economic, and ecological environments where reindeer herders live, consequential social change has been extreme over the last one-hundred years, and significant in the post-Soviet era, especially in Russia.

The conditions of reindeer herding today are similar to conditions in other regions where pastoral nomads are incorporated into national economic systems. The imposition of 'rational' herding techniques has

forced a severe redefinition of social structure and resources, with Western market-oriented concepts of 'rationality' replacing Native concepts of wider social inclusivity locally, and sustainability. Rational herding techniques are usually defined as herd maximization through ranching techniques with emphasis on quantity over quality to supply a commodity market. Increasingly, pastoralists are dependent on the national governments ruling their territories for their economic well-being. While this seems to be simply an accelerated version of the ever-present trend among pastoral nomads towards sedentarization, the social disruption caused by it is leading to a breakdown of cultural identity in many areas.

Today, many reindeer herding populations in the former Soviet Union are experiencing economic and social collapse resulting from the chaotic conditions following the end of the Soviet Union and attempts at privatization and institutional reorganization. Overall, reindeer herds have experienced plummeting populations due to political-economic and ecological factors. This, coupled with a lack of facilitating infrastructure, has led the institution of reindeer herding among some groups towards potential oblivion. Reindeer herding, however, continues to be an integral part of herders' identity and economy, and its complete collapse would likely be devastating to reindeer herding cultures.

This is not to say that reindeer herding as an institution is necessarily dying among reindeer herding populations, but rather that its success as a subsistence-supporting economic activity is threatened. This is partially due to the increasing incorporation of minority

populations into the cash economies of overarching nation-states, and partially a consequence of the reorientation of some reindeer herds towards the commodification of reindeer products for the market. While in some areas of the circumpolar North reindeer herding populations have oriented increasingly towards production for the market, these populations also have long traditions of trade with neighboring non-herding peoples.

Other factors, besides ecological and political, contribute to the limitations on economic growth (or even stability) among reindeer herders, particularly in the reformed system that has emerged in Chukotka since the dismantling of the Soviet Union. Economic growth was encouraged by Soviet authorities, and again following the collapse of the Soviet Union through official efforts to transform herding operations into capital enterprises. These other factors also serve to hinder reform and include political and economic instability, and fears that political instability will lead to a backlash of the system.

Fears of instability are well founded and are based on historic precedence including the Stolypin Reforms (cf, Macey 1987, 1994) of the Tsarist era and their collapse, and the NEP (New Economic Plan) period, and the violent suppressions that followed realignment. Additionally, other non-historical factors contribute to this instability, including government inability to protect private property or lease contracts, a general inability or reluctance to participate in changes, and a lack of reform occurring at a significant level at the base of society to support reform initiatives at the top (i.e., development of market-supporting

systems at all levels of society, rather than only at the level of the government).

Among contemporary reindeer herders, political structures are a mixture of traditional institutions and institutions of the politically dominant culture. Therefore, kinship-based political institutions occur alongside state-based institutions on different political levels. Generally, local affairs are managed locally, with various degrees of state oversight, but the Soviet state meddled much more in local affairs. Wider political affairs are usually managed by extensions of the national-state political structure. These structures are dependent on the forms of national government of the states in which reindeer herders dwell. The various forms of government, and their historical antecedents, have influenced traditional political structures heavily and in some cases have fully replaced traditional forms.

The underlying trends of these contemporary sociocultural conditions are widespread throughout the circumpolar North, and issues such as subsistence and autonomy are inseparable from the current state of reindeer herding. Across the North there is a tendency for reindeer herders to be increasingly incorporated into (i.e., dependent on) cash-and-wage economies which are tied to regional, national, and global markets. This situation has led to a re-evaluation of the economic role of reindeer herding among populations throughout the circumpolar North, as well as to other indigenous lifeways such as hunting and fishing. The trends and issues outlined above exist in a deep historical context stretching across a millennium.

REINDEER HERDERS AND THE OUTSIDE WORLD

Although the majority of reindeer herding societies have long been in contact with non-reindeer-herders, isolation from the 'outside world' tends to characterize the historical situation experienced by the individual reindeer herder. In some areas, notably in Fennoscandia, contact between herders and non-herders has occurred since medieval times. However, as Mongolic and Turkic-speaking peoples moved west, and Russians and other Slavs moved east, contacts increased, as did trade. The earliest relations between reindeer herders and the 'outside world' were based on trade, and colonization and conquest tended to follow later.

This trade has endured since its inception, and continues largely to define the basis of the relationship between herders and non-herders today. Whether through barter, taxation, redistribution, or market relations, reindeer products have been sought and acquired by non-herders. It should be noted that this includes sea-mammal hunters as well as other hunter-gatherer populations and is not limited to formal contacts with companies or representatives of nation-states. This economic-oriented interaction with the 'outside world', and the sociopolitical place of reindeer herders within a global context, is discussed below.

Reindeer Herding Economies and Global Capitalism

The embeddedness of material life in reindeer herding societies differs across cultures and time, and differing degrees of disembeddedness resulting in commodification have occurred. The organization of production in reindeer herding societies, including the scale and purpose of production, can seriously limit the sustainable effectiveness of reindeer herding within the global context. While in the two Saami cases and the Chukchi case there exist traditions of individual or group ownership of reindeer, among the Iñupiaq herders of the Seward Peninsula private ownership of reindeer is often looked upon as exclusionary. Sometimes ownership of reindeer and the practice of herding itself is even seen as incongruous with Iñupiaq ethnic identity, thereby limiting the effectiveness of private ownership in the larger capitalist economy and limiting labor access. This shows how social organizations that do not carry a tradition of private ownership and/or the trade of surplus limit the success of reindeer herding within the global context.

The exchange of surplus products for goods of non-local origin, though rarely equitable, provided the basis for the eventual incorporation of reindeer herding into the global capitalist economic system. All of the nation-states that contain reindeer herding populations participated in the growth of the world capitalist system. As such, the inhabitants of these countries, including reindeer herders, were, willingly or not, involved in the emerging global market. Generally, the interests and

investments of national governments in reindeer herding communities was, and continues to be, tied to developing resource extraction infrastructure. Concerns of reindeer herders typically were ignored politically until recently.

In general, reindeer pastoralists are actively involved in the market exchange of commodities. Some researchers have suggested that pastoralists were the original capitalists based on their reliance on the increase of herd size and their entrepreneurial qualities (Paine 1971: 157-172). Specifically, Robert Paine suggests (1971: 169-170) that the values of reindeer herders are expressed "...in production, in capital, in aggrandizement..." and that what seems to be habitual generosity among hunters is matched by what seems to be habitual parsimony among pastoralists. Minimally, then, reindeer pastoralism is amenable to market economics. It should be noted, however, that the controlled harvest of the pastoralist does not necessarily reduce to stinginess.

Tim Ingold, alternatively, cautions against this economic functional analogy of pastoralism with capitalism (1980: 230-233). Ingold points out that the pastoralist sells animals on the market only to purchase essential raw materials for domestic consumption, not to invest in factors of production (1980: 231). Pastoralists sell their products to obtain a target income for meeting domestic needs, and so production is oriented towards livelihood. Ranchers, in contrast, are oriented towards profit-making. Furthermore, though economic rank does emerge among reindeer herders, the social relationship between those with herds and those who provide labor to enable access to the

products of reindeer herding is temporary. Formerly. herding assistants could acquire reindeer from the herder over time from which a separate herd could be constituted (Ingold 1980: 234).

Nevertheless, contemporary reindeer herders worldwide depend on access to regional and global markets to sell their products. This requires among the Chukchi, Iñupiat, and Saami (and most other reindeer herding populations) the combination of subsistence and capitalist economic behaviors within the pastoral mode of production. A number of issues of political economic concern, however, are affecting the way in which local political structures and organizations manifest. While some issues arise from legal inconsistencies or challenges (as in Finnmark and the Seward Peninsula), others are struggling to adapt to new economic and political systems (as in Russia). The legal issues of development, environmental degradation, usufruct rights, and access to the reindeer herding industry remain beyond the immediate concerns of reindeer herders in the Russian Federation, who are struggling in most regions to maintain the health and stability of reindeer herds.

The incorporation of local, subsistence-oriented reindeer herding economies into the global capitalist market has been problematic. This occurs because of the inherent structural incompatibility of a local subsistence-based economy and a global capital-based economy in all cases utilized in this dissertation. While some concepts stemming from reindeer herding economies coincide with capitalist concepts, notably herd maximization and private ownership, the collectivistic elements of subsistence production prove unwieldy in a capitalist system, where

exclusionary ownership is more prevalent, especially when combined with competition.

Reindeer Herders as 'Fourth World Peoples'

Reindeer herders occupy a political position in all parts of the circumpolar North that severely limits their access to power. Having neither separate fully autonomous states nor politically contiguous unity within states, reindeer herders have often been marginalized. Even in areas where local autonomy has been secured, laws and expropriations from the overarching nation-state continue. The term 'fourth-world' has been defined in a number of ways, but in this dissertation I adhere to its usage as per Nelson Graburn:

> The most widely agreed upon meaning of the term IV World refers to the indigenous, autochthonous peoples whose lands have been overrun by the modern nations of the I, II, and III worlds. (Graburn 1981: 68)

Indeed, most areas inhabited by reindeer herders are also inhabited by other ethnic groups, whether indigenous or colonial in origin. In most areas, especially in Eurasia, indigenous reindeer herding populations are minorities. In the post-Soviet period, based on practices of the Soviet regime, some indigenous reindeer herding peoples have secured or been granted a degree of local autonomy. In Alaska and Norway, some formalization of customary law or guaranteed access to local resources has been allowed by national governments. Even in these areas, however,

economy and politics are closely tied to the national government, and often non-Natives hold positions of considerable political and economic power and influence, particularly in Russia.

As Fourth World peoples, some politically active reindeer herders have developed associations or other cooperative institutions to raise issues for discussion or policy-making. These organizations exist from local to international levels, and while they rarely possess binding legislative powers, they are politically legitimized by the United Nations's sponsoring of the creation of Convention 169 by the General Conference of the International Labour Organisation (1989). This document is oriented towards providing legal recognition of the rights and protections of fourth world peoples. Consequentially, it is often used as a basis for the legal struggles of fourth world peoples, including most reindeer herders, against potential oppression or exploitation by national governments. Of course, its effectiveness largely rests on the nature of the leadership of a nation-state.

SUMMARY

The members of reindeer pastoral societies use a resource that has been exploited for thousands of years and in many different ways. Reindeer form the resource basis of these northern pastoral societies, but no population depends solely on reindeer to satisfy all subsistence needs, and the exploitation of reindeer resources can be used for non-subsistence activities such as trade and as symbols of social interaction

and exchange. Reindeer herding, therefore, provides a flexible resource base, re-adaptable even under outside pressures and their consequential internal sociocultural changes.

This process continues today, but on a much wider, circumpolar scale. Internal cultural changes have led to the successful continuance of reindeer herding though adjustments and increasing incorporation into global markets. Though the demands of these global markets threaten to change the nature of reindeer herding and the production of reindeer products, reindeer herding is surviving, providing subsistence needs and, in some places, reindeer products for regional and global markets.

In this latter condition, as a producer of goods extracted from a capital base of reindeer, reindeer herders can, in viable ecosystems and with the maintenance and reproduction of herding knowledge, participate in regional and global markets. However, reindeer herders are disadvantaged compared to other producers of livestock products, due to their geographical distance from supporting economic infrastructure and markets. Consequentially, reindeer herding seems best suited as a subsistence economy. Its existence as a subsistence economic strategy seems threatened in the context of the global capital economy. Reindeer herding as a capital endeavor and reindeer herding as a subsistence activity will be analyzed in the following chapters.

CHAPTER 2

METHODOLOGY AND THEORY

INTRODUCTION

Trends in reindeer herding today suggest a steady, and in some areas, rapid dissolution of reindeer herding as a viable economic strategy. While the occurrence of this reduction in the number of individuals engaged in reindeer herding, coupled with the decline in reindeer populations, is universal, it is not uniform across the case study areas. This lack of uniformity can be explained by a variation in conditions throughout the circumpolar North, including a range of economic, political, and ecological factors. Each case study, presented in detail below, illuminates some of these differences and their consequences. In spite of this trend, individuals from reindeer herding communities express the wish to continue herding. In some areas, herders dismayed at the bleak outlook for the future of reindeer herding. The central question of this dissertation addresses the role of reindeer herding as an integral part of a reindeer herding culture.

Reindeer herding must also be analyzed in conjunction with the significance and viability of the occupation of reindeer herding as a capital based enterprise, an inescapable reality of the expanding global economy. The specific objectives necessitated by this central problem include the need to examine the processes, elements, and consequences

of ecological and economic change in the present and recent past among reindeer herders of the circumpolar North. This objective, therefore, requires a dual approach which considers the dynamic systems of ecology and economy.

As with any investigation of social institutions, a historical perspective must be understood to situate the current conditions within a context of relevant historical factors. Specifically, the preexisting social situation, within a historical context, will allow for an understanding of the developmental sequences taken by the institution. In addition to these economic conditions are ecological factors, which in the case of reindeer herding in the post-Cold War era have proven fundamentally critical to reindeer herding worldwide. The economy of reindeer herders, as with all economies, is tied into other social factors.

This necessitates an evaluation of the ecological factors, political factors, and economic factors of change among the four very different reindeer herding societies that are the focus of this dissertation, and to apply these findings to the understanding of the continued viability of reindeer herding among these cultures and generally in the circumpolar North. It should be noted, however, that this dissertation is not a work in cultural ecology, but instead considers the role of ecology as it affects human systems and reproduction. As such, it is not a specialized ecological study. Aspects of economy and politics constitute the often inseparable foci of this dissertation.

Within the scope of this dissertation, ecological factors include the problems and challenges presented by caribou and wolves, and the icing-

over of pastures, which leads to reindeer starvation. These problems are widespread, especially in the region of the Bering Strait Peninsulas, and can be exacerbated by political factors, such as controlled access to pastures, limitations on the practice of reindeer herding to specific ethnic groups (to Saami in Scandinavia, and formerly to natives in Alaska), and controls on ecological sustainability. Additionally, governmental policy towards reindeer herders fluctuates as political orientations undulate and as political structures are reformed.

Political factors also include laws of the state and their reckoning with customary laws of the reindeer herding populations within a state. Most importantly, regimes of government assistance heavily influence the viability of reindeer herding as an economic activity, as well as the economic viability of a herd and its human dependents. Inherent to a political economy are ideological factors, which can have their origins in the overarching nation-state or can originate locally in response to local perceptions of needs and conditions.

In each of these areas, the experiences of reindeer herders and their communities have differed in the expanding global economy, as have the viability of their herds. Consequentially, the state of reindeer herding as a cultural and economic institution in each case differs. While herd viability continues in some areas, in others decline is endemic and attempts at reorganization have failed. These internal changes are largely responses to external regional, national, and global conditions.

External situations such as national and other political borders play a role in the movement of reindeer herds and products. These power regimes contribute to herd viability and to the viability of associated reindeer herding institutions. Very little change in reindeer management is entirely endogenous due to efforts expended to respond to larger social systems. In the past fifteen years these external political and economic stimuli have significantly affected reindeer herding systems worldwide. Consequentially, cultural manifestations vary between cases, though commonalties and continuities remain.

This ties directly into specific historic economic factors through considerations within the context of a political economy, including the breakdown in the former Soviet Union of distribution systems, the opening of the reindeer industry in Alaska to non-Natives, and the decline of the Asian antler-velvet market. Existing infrastructural situations also determine in part the economic viability of reindeer herding. This dissertation examines the differences that have developed in contemporary systems of reindeer herding under these conditions, and the viability of reindeer herding as a continuing socioeconomic institution.

SIGNIFICANCE OF A COMPARATIVE STUDY OF CONTEMPORARY REINDEER HERDING

This study is significant in understanding the change of post-*perestroika* political and economic institutions in general, and the

viability of reindeer herding systems within such a context in particular. By identifying the causes of this change, here specifically among circumpolar reindeer herders, a better understanding of the potential consequences, and strategies for dealing with these consequences, can be developed. These strategies are applicable to future research into socioeconomic change among circumpolar reindeer herding peoples.

This research will reveal patterns of change and adaptation that would interest reindeer herders themselves, by illustrating both successful and unsuccessful re-organizational initiatives in the recent past and present and their broader social impacts. The significance of this study and thesis, then, lies in its applicability to the contemporary socioeconomic situation of reindeer herding. Additionally, this thesis is important to the understanding of the processes of sociocultural change and institutional redefinement among reindeer herders of the circumpolar North.

A knowledge of herding developments among the Saami, Chukchi, and Iñupiat, including inherent situational differences, is important for understanding the processes of change in reindeer herd management, and the consequences of herd management changes on other aspects of the herding society. Among all three groups, the rise of reindeer herding and its maintenance and changes in recent times is largely a result of the demands of various forms of political organizations and their economic consequences, mainly emanating from the encapsulating dominant nation-states (Norway, Russia, and the United States). The consequences of political and economic differences which arose from the

peripheral status of these cultures has predictably led to contested versions of the role of the past in contemporary herding communities.

These processes are invariably elements of a long-term, ongoing transformation of reindeer herding management techniques, and consequentially, of other institutions within reindeer herding societies. Therefore, predictions of future conditions of reindeer herding are firmly based in alternative representations of the past. These conditions lead to a dynamic process of symbolic readjustment, as idealized representations of the past must be taken into account along with experiences of the present.

This research not only provides an analysis of the widely differing processes of culture change among the Chukchi, Iñupiat, and Saami, but also highlights the impacts of different political and economic policies on reindeer herding cultures in the circumpolar North in general. Additionally, the role of reindeer herding in the contemporary world and the "incorporation" of Chukchi, Iñupiat, and Saami reindeer products into the global market economy must be considered.

My experiences in Chukotka and, to a lesser degree, Yakutia (Sakha), show that the understanding of the complexity of social hierarchies is possibly the most important factor in understanding the likelihood of culture changes arising to facilitate the involvement of herders in such an economy. The relative success of Saami integration into the market economies of Scandinavia and Iñupiaq integration into the American market stands in stark contrast to the opportunities existing for the Chukchi now or in the future.

This dissertation also provides an assessment of reindeer herd management techniques. While these techniques and their predecessors are relatively well defined among the Iñupiat and Saami, herd management techniques among the Chukchi are undergoing rapid and constant change since the fall of the Soviet state. Interestingly, however, techniques continue to strongly reflect Soviet-imposed methods, and older techniques are being revived (albeit with strong, Soviet-influenced, romantically oriented undertones).

In addition to issues of herd management, the investigation of environmental and social factors allows for a range of perception and definition of resources, strongly influencing relationships between herders and the state. The availability of resources, particularly pasturage, and the highly variable nature of "resources (now effectively 'capital') on the hoof," (Ingold 1980) continually redefines patterns of settlement and product distribution. These patterns vary widely between the Saami, Chukchi, and Iñupiat, in spite of similar physical environments and resource extraction strategy (e.g., herding).

The physical location of other non-reindeer resources, both living and mineral, also significantly influences relations between the herders and the state. The power of access to these resources is an important factor directing the course of culture change. This has been demonstrated through the consequences of relocation or expulsion of entire villages of Chukchi (and their Siberian Yup'ik neighbors, among others) to facilitate more efficient operation of state and collective farms. In contrast, the positive outcome of the challenge by the Saami in the

Alta-Kautekeino hydroelectric dam controversy led to recognition of Saami needs concerning the resources of the Alta-Kautekeino River. This success was in large part due to access to and participation in the political structures of Norway by Saami activists.

These events demonstrate a connection between public policy and sociocultural change. Such physical geographic concepts must be considered in any investigation of nomadic (or formerly nomadic) populations, or in more recent times, populations dependent upon mobile resources. Additionally, stimuli causing sociocultural change can be anything perceived by society or affecting society covertly. This, of course, is problematic, and is often best perceived through comparative methods. Comparing the elements and processes of change among the Saami, Chukchi, and Iñupiat highlights apparent differences in experience, while illuminating previously unforeseen commonalties. It must be noted, however, that while the natural and social environments place constraints upon social formations, the reverse also applies. Therefore, individuals and groups make unconscious (i.e., habitual) and conscious decisions that may ultimately affect the course of a sociocultural system.

A recognition of these two broad elements, the dynamic interaction of the group and the natural environment coupled with individual perceptions of society through time, allows for a more complete understanding of how and why a sociocultural system changes. This is in part accomplished by focusing on the interrelatedness of these perspectives, including social, symbolic, and environmental constraints

and opportunities, and how the development and usage of principles of social action and conditions for social existence are manifested.

THEORETICAL APPROACHES AND METHODOLOGY

This study of reindeer herding is fundamentally economic, focusing on the manipulation of reindeer as a natural resource. This includes breeding, maintenance of herd health, management of the reindeer as a herd and as a commodity, and the participation in a larger regional or global economic exchange system. Due to the sociohistorical developments of nomadic pastoralism in general, and reindeer husbandry in particular, reindeer herding is deeply intertwined in the cultures of its practitioners.

For these reasons, economic approaches will be used along with sociocultural approaches relevant to reindeer pastoralism and reindeer farming (ranching). In contemporary reindeer herding systems, a combination of economic strategies usually prevails, with widely varying success. However, the study of reindeer herding from the standpoint of an economist and an anthropologist differs conceptually in that an economist focuses on the production, distribution, and consumption of reindeer products, while the anthropologist focuses on the systems which enable and support these foci. Additionally, the economist most often studies macro-level phenomena regionally, nationally, or globally, while the anthropologist more often studies microlevel phenomena in a village

or local community, and only later links resulting data with macro-regional systems.

Economic anthropology also seeks to explain the processes of production, distribution, and consumption of resources, but in a culturally specific context. Through the understanding of economic structures and changes as analytical tools, both the structural changes *and* related socioeconomic consequences may be investigated and revealed. This approach, then, holds that the economic system of reindeer herding, especially in relation to the contemporary global market, is not simply a less complex form of market capitalism, in which individuals make economic choices based on rationality and a desire for personal financial profit. These behaviors would be consequences of incorporation into the European (now global) market capitalist system.

Instead, reindeer herding is at once a local-oriented food-producing economy which also is linked to local, regional, and even global markets. Today, the global market for reindeer products determines as much as any other factor the success of a reindeer herding operation. Therefore, any investigation of reindeer herding as an economic system must include strategies originating in both the anthropological and economic disciplines. Such an approach, however, remains socioeconomic in orientation, since an understanding of the *systems* of production, distribution, and consumption of reindeer products are paramount to understanding the viability or sustainability of reindeer herding as an economy.

A socioeconomic approach allows for a consideration of human behavior not so readily permitted in other approaches. Socioeconomic approaches to culture change, including economic change, also allows and includes questions of subsistence strategies, social organization, and individual and group attitudes. It is necessary, then, to consider all goods of consumer exchange, edible and inedible, including such concepts as 'symbolic capital' and the economic value of children. Therefore, the organization of the social group and its reproduction must be explored along with more traditional aspects of economic inquiry to gain a clear understanding of reindeer herding and its survival in the near future.

The conditions and socioeconomic consequences of the gradual incorporation of reindeer herders of the circumpolar North into the national economies of the modern states of northernmost Eurasia, and eventually North America, is the primary focus of this general investigation of economic change among reindeer herders. Such a general consideration includes an acknowledgment of the peripheral condition of reindeer herders as suppliers of reindeer products (i.e., meat, antlers, and furs) to the larger European and Asian market cores of the regional and world economies. This is taken into consideration in relation to settlement and migration patterns of reindeer herders. In addition, concepts of territoriality and spatial relation to resources must be considered, as well as perceptions of ownership and usage rights of resources among reindeer herding peoples.

A universalist economic approach to economy does not seem as useful in the study of economic change among reindeer herders as does a culturally and sociohistorically specific account of reindeer herding's economic structures and changes. What is important for this study is an explanation of the sociostructural consequences of the incorporation of one economic system (specifically reindeer herding in its various manifestations) into another economic system (i.e., a regional and/or global market economy). To address this effectively the social structures of reindeer herding groups must be understood in relation to external stimuli and internal adjustments to sociostructural changes. This occurs today within the context of a world-system, namely the global, capitalist economy. However, contemporary reindeer herding utilizes a mixed economy, combining local, domestic economic concerns with regional demands and opportunities. The existence of this mixed economy among contemporary reindeer herders can be explained through particularistic historical conditions within the context of new institutional economics.

New Institutional Economics, "New Institutionalism," and Contemporary Reindeer Herding

As its basis, new institutional economics (NIE), also referred to as the New Theory of Organization, proceeds from the assumption that institutions affect the performance of political and economic systems, and these institutions change in response to individual action (Acheson

1994:4; Furubotn and Richter 1997:1). In its current form, however, new institutional economics derives primarily from the institutional economic writings of Thorstein Veblen and John R. Commons, who supported relativistic approaches to human economic behavior. As well, a rejection of the universality of economic theories as 'laws' was maintained, and efforts, primarily by Commons, to temper the injustices inherent in the capitalist system were made through academic writings and political action. Due to this strong economic emphasis, the basic tenets of new institutional economics will be used in part alongside a socioeconomic orientation, and will be termed for this dissertation "new institutionalism."

Focusing on the views and behaviors of individuals, whose actions give rise to institutions, new institutional economics, and by extension new institutionalism, assumes a situation of bounded rationality in which knowledge is costly to obtain (Acheson 1994: 7). With imperfect knowledge, decision-makers behave opportunistically, as is reflected in the increasing diversity of occupational pursuits among contemporary reindeer herders, which serve to enhance economic opportunities or offset family and community transaction costs. Consequentially, individuals will seek to maximize their own interests within the constraints of a particular institution, or release themselves from such constraint through 'corruption' or separation from the institution. This separation from or modification of economic behavior among reindeer herders applies to all cases considered in this study. Additionally, some of the most important kinds of exchanges are non-market in nature,

occurring between individuals of the same institution. This applies to exchange among reindeer herders within the same herding operation, and also helps to explain the mixed economies of contemporary reindeer herders.

Based on the concept of the 'institution,' new institutionalism may seem unclear without a clarification of how an institution is defined. An institution, as defined for this dissertation, is any custom, practice, relationship, or behavioral pattern present in a community. However, both Acheson (1994: 8-9) and Furubotn (1997: 6) add that an institution is a set of formal and informal rules that can be enforced. Furubotn further clarifies the role of the institution by identifying its purpose as directing the individual in a particular direction. As such, institutions reduce uncertainty by providing structure to everyday activities. As Acheson points out (1994: 9), institutions are a substitute for accurate information. Institutions provide opportunities as well as impose limitations on choices.

Among reindeer herders, especially under conditions of political and economic uncertainty, coupled with limited access to processing and markets, accurate information about markets can be difficult to obtain. Consequentially, reindeer herders in each of the four case studies rely on a variety of institutions, developed internally and accepted or imposed externally, to lessen uncertainty in economic transactions. These serve to limit overexploitation of resources, namely pasture. As well, such institutions limit access to reindeer herding, as is best illustrated in the Reindeer Herding Act in Alaska which formerly limited reindeer herding

to Natives. This followed a period of dominance and overexploitation of pastures by the Lomen brothers, whose monopolistic business practices led to the demise of many herds managed and owned by Natives on the Seward Peninsula.

One of the central institutions studied within new institutionalism is property rights. Delineated and enforced by an institution of governance, property rights can be defined as the right to use and gain benefits from physical objects or intellectual works and the right to demand certain behavior from other individuals (Furubotn 1997: 5). Manipulation of these property rights is fundamentally a manipulation of structures of power, and contention is likely in such situations. Property rights can take the form of open access (i.e., no constraints), communal property (community ownership separate from government), state property (control by government), and private property (exclusive individual rights).

Reindeer as common property occurs among many reindeer herding populations, though private ownership of herds has long been a feature of herding in some areas. This is more pronounced among the Saami of Finnmark and among the Iñupiat of the Seward Peninsula than among herding populations living within the former Soviet Union; however, even in the Soviet Union some privately owned deer were permitted. These situations are largely due to historical circumstances, though traditions of ownership persist. Whether reindeer as private property or as common property is more stable economically speaking is also largely dependent on existing market and transportation infrastructures. Typically, the

problems associated with common-property resources include issues of individual overexploitation due to a lack of exclusive access to resources coupled with a lack of individual responsibility, commonly referred to as 'the tragedy of the commons.' In contemporary reindeer herding societies (as in most contemporary societies), a combination of property rights regimes coexist. Among reindeer herders, however, heaviest scrutiny has been placed on communal property and open access resources, and its supposed inevitable abuse. This "common property problem," as outlined by Garrett Hardin's now famous article, "The Tragedy of the Commons" (1968), holds that open access resources, such as pasturage, will be abused until economically destroyed.

Four basic assumptions of the common-property model that lead to this condition of overexploitation include individual users seeking to maximize profit, even at the expense of the common property itself, or the society as a whole. These exploiters possess a technical capacity to exploit resources at a higher rate than the property can naturally regenerate those resources. The users of common-property will not or cannot erect protective mechanisms to prevent over-exploitation. Finally, these problems of over-exploitation can only be controlled by converting the property into a condition of private ownership or through government intervention (Acheson 1989: 357-358).

However, not all societies and cultures posses institutions which encourage over-exploitation, and people are not necessarily universally motivated to over-exploit. Furthermore, societies do erect institutions to prevent over-exploitation of common-property. Individual ownership of

property is one such mechanism, though it has changed the nature of common-property itself. Among the reindeer herders of the circumpolar North, overexploitation rarely occurs without outside stimuli.

The enormous production levels of reindeer during the Soviet period are an example of external controls elevating herd sizes well beyond natural levels of sustainability, and with the end of Soviet controls and assistance, herd sizes were drastically reduced, causing severe hardships for herders and their families. In comparison, the herds of the Seward Peninsula have fluctuated as the natural environment and external markets changed, while the herds of Finnmark have remained relatively stable due to intensive management techniques. These examples cast doubt on the universality of 'the tragedy of the commons.'

Robert Paine (1994: 187-189) rejects the 'the tragedy of the commons' understanding of communal property rights, and points out that Hardin combines notions of 'open' and 'communal' property or resources. Indeed, Paine remarks:

> An alternative view,..., is that the condition on which some would put the Tragedy label speaks to, more than anything else, the malfunctioning of relations between the state and the pastoralists. (1994: 187)

Nevertheless, application of the "tragedy of the commons" fallacy to pastoralism in general, and reindeer herding in particular, has led to 'solutions' limited to privatization and intervention by an external authority. This has resulted in states implementing "rationalization"

programs as reindeer policy, which has led, in part, to a reduction of reindeer and reindeer herding activities.

Recently, Christopher Hann (2000) has reversed the presuppositions of the "tragedy of the commons," documenting the emergence of a "tragedy of the privates," in former East Germany where private property relations have proven costly. The same can be said for the former Soviet Union, where privatization of property rights has led to severe deprivations, especially in Chukotka and other 'frontier' areas. These misunderstandings of property relations call for "...a more realistic and less ideological approach..." Hann states:

> The investigation of property cannot be confined to the 'private law' notion of ownership but must open up to include 'public law' aspects of authority, citizenship and social cohesion. (Hann 2000: 6)

In other words, assessments of regimes of property rights should be relativistic--relevant to the culture from which concepts of property rights derive. Acheson affirms this notion by noting that natural resources (e.g., common property resources; pastures) are more likely to be overexploited by technologically 'advanced' societies with large populations where resources are sold in large international markets (Acheson 1989: 376). This effectively applies to the management of reindeer herding operations with an orientation toward supplying a market, rather than production for subsistence.

In an earlier work (1998: 34), Hann recommends paying attention to the cultural and power relations aspect of property relations in economic anthropology. Hann explains that any investigation into property relations requires the consideration of the total distribution of rights and entitlements within a society, including material things, knowledge, and symbols. Through the use of institutions, behavior regarding common property is controlled, but also institutions create political environments which effectively inhibit personal choices. This institutionalization of the management of common property resources creates a user-pool with expectations of access. Successful management leads to the maintenance of ecological sustainability while reducing the traditional pool of users as little as possible (Buck 1989: 110). This remains a considerable challenge among reindeer herders, especially in the contemporary condition of a universal, though variable, reduction in the scale, and therefore opportunities, for reindeer herding.

The notion of sustainability, therefore, includes biological, social, economic, and political perspectives. Åsa Nilsson Dahlström (2003: 123) succinctly described the relationship of these forms of sustainability:

> Biological and social, economical and political sustainability are, however, also interrelated aspects in the sense that the preconditions for biological sustainability are usually determined by the social, economical and political demands for sustainability. Biological stability is also partly independent of other demands, however, since there are limits to human control of the lives of plants and animal species.

As will be demonstrated in this dissertation, all aspects of sustainability outlined by Dahlström must be considered in an evaluation of the sustainability of reindeer herding.

Sustainability, then, is directly linked to the institution of property rights. Among reindeer herders in the case studies, these property rights, while formally defined, vary considerably. Perhaps the greatest threat to sustainable reindeer herding is the usurpation of previous property rights held by reindeer herders, lost in some cases due to a deficiency in access to information, and in other cases due to outright expropriation. Formal legal definition of property rights is important in building confidence among economic actors, and among reindeer herders, it has been personally observed that an increased unclarity of property rights among reindeer herders negatively affects potential initiatives to stabilize or increase existing herds.

One final consideration relevant to this discussion of new institutionalism is the issue of transaction costs. Furubotn defines this as search and bargaining costs (market usage costs) and administrative coordination within a hierarchical organization (1997: 8). Acheson places the issue of transaction costs as perhaps the most important concept of institutional economics, and notes that three factors can lead to their increase: opportunism, frequency of exchange, and asset specificity (1994: 11). Generally, with more frequent exchange, knowledge increases and risk is diminished. As well, risk is increased and opportunism more likely when exchanges are infrequent, or

especially if exchange depends on a specific person, location, or physical asset.

This situation is indicative of the importance of transaction costs among reindeer herders. With exchange outside Fennoscandia being relatively infrequent, and often dependent on a specific broker, location, or physical asset, transaction costs can be rather high. Furthermore, transaction costs are largely embedded in the normative system of a society. In the absence of institutions such as labor organizations or contract law, transaction costs are raised among reindeer herders. These costs, however, can be moderated by rules or institutions, rendering the economic activity less costly.

Sustainability among reindeer herders participating as direct economic actors in the global economy, then, requires a decrease in transaction costs, and particularly costs of distribution, to enable a more effective value to be maintained on reindeer products. A variety of regional, national, and transnational organizations have been formed among reindeer herders, and those of the case studies are detailed in Chapter 6. These institutions can be used to facilitate transactions, even if only by providing initial commercial contacts with buyers and processors of reindeer products. Such cost avoidance is critical to efforts towards economic maximization for reindeer herders participating in the global market economy..

New institutionalism, therefore, is useful in explaining, in part, the variation in economic organization and behavior among contemporary reindeer herders. First, new institutionalism, by taking

into account transaction costs, can help to explain the different levels of economic stability among the reindeer herders of the case studies (see below). The variations are dependent upon market efficiency, including the emergence of non-market organizations to provide for resource exchange. As well, new institutionalism can reveal how societies allocate and enforce property rights, and how this influences market efficiency. Finally, the effects of outside influences, including government actions and transaction costs, and ecological change, can be analyzed within culturally or socially relevant contexts.

Reindeer Herding as a Domestic Mode of Production within the Capitalist World System

Reindeer herders, as with all peoples of the world, are undergoing a transformation that is based in the establishment of a capitalist world-system which, because it became the dominant form of economy, came to affect all people, everywhere, though to differing degrees. This transformation has led to the arrival of more than just commodities and media access in reindeer herding communities, and also includes institutions such as self-determination, representative government, and transnational non-governmental organizations, among many others.

Situated effectively between local economic needs and global economic opportunities or expectations, reindeer herders employ a wide variety of strategies to succeed economically. Fundamentally, a domestic mode of production (DMP) characterizes the economic system of reindeer

herders in general, and it is from this 'level' of production that reindeer products, and the capacity to acquire these products, are created. The excess production can then be sold as a market based commodity, assuming the necessary distribution and marketing infrastructures are in place. Nevertheless, it is the consumption of the products available for subsistence that is the basis for the continuation of the traditions of reindeer herding through biological and, by extension, cultural reproduction, among most reindeer herders.

The domestic mode of production, as presented by Claude Meillassoux (1975), is based on the acquisition of subsistence goods through the labor and reproduction of that labor within the domestic community. The domestic mode of production is characterized by a small labor force differentiated by sex, simple technology, and finite production goals oriented to meet subsistence needs. Within this mode of production, labor power is not a commodity, and it cannot be accounted for within the capitalist concept of hourly calculation (Meillassoux: 51). Based on this assumption, the domestic economy, reproducing itself at a generational level, must be understood within its own, rather than within a capitalist, context.

This includes specific conceptions of what domestic production is, as an institution defined by the production of goods and services for the household. Susana Narotzky (1997: 148-149) has advanced an alternate way of viewing labor, considering it from the reproductive side, or from a 'means of livelihood' perspective--in other words, from a perspective of 'use value.' In this sense, domestic production remains comparably

valuable to other forms of production. The 'use value' of domestic production among reindeer herders is therefore comparable to the production for markets, reflecting the dual nature of the reindeer herding economy.

Within the domestic mode of production, specifically, Meillassoux acknowledges the use of land as the instrument of labor with delayed production, and human strength as the primary source of energy. This is directly applicable to the economy of reindeer herding as a subsistence activity. Also, the use of an individual means of production, in which an individual investment of labor is all that is required, is characteristic of the domestic mode of production (Halperin 1994: 48-49). In this system, then, energy is spent by the individual producer to acquire necessary subsistence, which is transferred through consumption back into energy.

Caroline Humphrey considers the presence of this domestic mode of production-like economy in the post-Soviet economy of Asian Russia, particularly among rural populations. As she points out (1998: 3), the dismantling of collectivized farms in areas of plant agriculture results in the creation of hundreds of households on privatized plots. Similarly, while former reindeer herding collectives were forced by necessity to remain coordinated in their ownership and labor, production is primarily or entirely directed towards the consumption needs of the local community. These entities are encouraged into greater productivity for the outside market by a collection of reciprocity ties with the leadership. These ties of reciprocity, however, are only symbols of a supposed dynamic social balance between the leaders and the rest, with the leaders

being in fact masters of the social organization, and hence, the lots of those within their domain (Humphrey 2002: 174).

Importantly, the domestic mode of production, as developed by Claude Meillassoux (1975) and Marshall Sahlins (1972), is consistent with new institutional economic theory. Both focus on the role of the individual as a relevant factor in the development of institutions, and both acknowledge that institutions influence and direct the decision-making process of the individual. Though it is acknowledged that the domestic mode of production was originally intended for application to peasantries (cf. Chayanov 1966), which is a particularistic socioeconomic structure rooted in feudalism and capitalism, its application to a wider array of socioeconomic structures is relevant (cf, Sahlins 1960 and 1965).

In fact, not only is the domestic mode of production consistent with new institutional economics, but it is also relevant as a unit of organization within the construct of the capitalist-world system. Indeed, as Meillassoux explains:

> On the contrary, in the last analysis, we find that all *modern modes of production*, all classes of societies depend, for the supply of labour-power, on the *domestic community*. As for capitalism, it depends on the domestic communities of the colonised countries [or 'fourth-world' peoples, such as reindeer herders] and on its modern transformation, the family, which still maintains its reproductive functions, although deprived of its productive ones. From this point of view, the domestic relations of production can be considered as the *organic basis* of feudalism, slavery as well as of capitalism or bureaucratic socialism. (1975: xiii; italics added)

The domestic mode of production, then, remains widely the basis for production, through its supply of labor, within many overarching economies. As well, the domestic mode of production reproduces and maintains itself successfully within these overarching economies, changing as influences or demands warrant. Again, Meillassoux explains:

> ..., one cannot assume that under the impact of imperialism the domestic economy is *ipso facto* transformed into an impoverished form of capitalism...It is not enough simply to deny dualism [simultaneous presence of unconnected industrial and 'traditional' sectors] by claiming that under the influence of colonisation all productive relations become capitalist; we must study how modern imperialism manipulates all these diverse forms for its own profit. We will therefore be exploring not the destruction of one mode of production by another, but the contradictory organisation of economic relations between these two sectors (the capitalist and domestic), one of which preserves the other to pump its substance and, in so doing, destroys it. (1975: 98)

So, in any imperialistic situation, which existed in all areas of the four case studies, this parasitic occurrence of contradictory organization of economic relations is present. Significantly, apart from natural, non-socially directed instances, reindeer herding as a domestic mode of production suffers largely due to its incompatibility with capitalism, including its incompatibility with the capitalist world-system and the demands of globalization.

Immanuel Wallerstein's world-system theory (1974) views the integrated world economy from the perspective of an economic 'center' and considers its relationship to the world economy's semi-periphery and periphery. Thus, the world-system approach provides a model for the study of 'underdeveloped' economies in relation to the 'developed' societies within the world capitalist economic system. This theory is directly applicable to the contemporary situation of reindeer herding throughout the circumpolar North, within which traditional reindeer herding economies are peripheral to the core economic structures of the nation-states in which they are situated. In fact, within the global economy, the viability of reindeer herding beyond production for subsistence is heavily dependent on external markets and infrastructural connections to those markets.

Though world-system theory was first used in anthropology to explain the condition of underdevelopment of peasant communities as a condition of the development of capitalism (see Wolf 1982), it is directly applicable to reindeer herding economies. Also, while reindeer herding economies do not produce materials generally desired by core powers and extracted from peripheries, they do supply surpluses, and sometimes more, to the core. This is specifically relevant in a case from outside this dissertation, among the Nenets of the Yamal and Taz districts of the Yamal-Nenets Autonomous Region. Here, oil and gas extraction are the predominant industries, causing the degradation or destruction of pasturage for reindeer, While the food demands of the workers in the oil and gas industry have led to the stabilization of reindeer populations

and have provided a steady stream of commerce in reindeer products, industrial activity is destroying the source of the livelihood of the reindeer herders: the pastures themselves. In addition, a railway is planned to be extended into the area, which will further negatively impact the quality and availability of pasturage (Jernsletten and Klokov 2002: 56). This situation hearkens back to the quotation from Meillassoux above, "the contradictory organisation of economic relations between these two sectors (the capitalist and domestic), one of which preserves the other to pump its substance and, in so doing, destroys it" (1975: 98).

The world-system approach as used in this dissertation, coupled with issues of globalization (see below), rests on the following five basic assumptions: (1) in the modern world, there is one basic social whole; (2) the world-system is integrated economically, though fragmented politically; (3) the world-system is economically differentiated; (4) this economic differentiation (inequality) is a historical product created with the formation of a capitalist world during the period of Western colonialism and post-colonialism; and (5) social processes in particular regions can only be fully understood in the context of their place and function in the world-system (Roseberry 1989: 110-111). In the post-Cold War era, these assumptions adequately describe the position of reindeer herding in the global economy.

In addition to these five assumptions, Wolf (1984: 390-391) delineated the effective limits of the first, that there is one basic social whole:

> ...we can no longer think of societies as isolated and self-maintaining systems. Nor can we imagine cultures as integrated totalities in which each part contributes to and organized, autonomous, and enduring whole. There are only cultural sets of practices and ideas, put into play by determinate human actors under determinate circumstances...the divergent paths of groups and classes...do not find their explanation in the self-interested decisions of interacting individuals. They grow out of the deployment of social labor, mobilized to engage the world of nature.

Thus Wolf qualifies here the limits of the role of the individual (as a rational decision-maker whose actions lead to the emergence of institutions as in neoinstitutional approaches) and the limits of the role of the world-system (as per Wallerstein and Frank).

Nevertheless, as the world-system approach suggests that all societies are to some degree integrated into the world-capitalist system, the use of this model is appropriate in the study of pastoralists in general (or is as appropriate as the study of peasants within the world-system model). Pastoralists, traditionally dependent on sedentary agriculturists, are at varying degrees integrated into the world-economy, and are therefore by extension themselves integrated into the world-system. Today, especially, pastoralists (or 'pseudo-pastoralists') interact with national governments directly, and often directly participate in the market as well. Thus, the historical interactions of pastoralists with other societies must be considered as well in a world-system approach (or any global or even regional approach) to fully understand the economic

ramifications of such an involvement in a regionally or globally integrated system.

Since this dissertation focuses on the state of reindeer herding in the post-*perestroika* period, and since reindeer herding has emerged from socialist Russia into a form of open-market capitalism, Wallerstein's world-system theory has become even more appropriate as a model to help understand the relationship of reindeer herders to the 'outside world.' Even in Soviet Russia, reindeer herders were required to improve efficiency through their reorganization into state and collective farms, from which they would supply reindeer products to the Soviet Russian industrial and urban core, in spite of socialist definitions of material relations. Though Wallerstein did not focus on socialist economies, they nevertheless display core-periphery tendencies in their relationships between the extractors and producers of resources, and the consumption of these resources within the socialist economy.

This study of an economic system in the contemporary world-system requires critical consideration of policies of development implemented by governing institutions. In the post-Second World War era, the emerging global economy was approached through a number of paradigms, including modernization and dependency theories, and to a lesser extent transformation theories. These theories served to provide an understanding of the global condition of humanity, but also were used to promote economic development in many parts of the world, and by extension, political influence.

Largely emerging from the 'underdeveloped' world in response to the modernization policies of the West, dependency theory offered an alternate view of social development. This school arose in response to the bankruptcy of the program of the U.N. Economic Commission for Latin America (ECLA) in the early 1960's (So 1990: 91), which was based on modernization principles. Additionally, dependency theory arose as a response to the crisis of orthodox Marxism in Latin America in the early 1960's. Essentially brought to North America by Andre Gunder Frank, dependency theory quickly gained support in the United States during a period of social upheaval linked to the Vietnam War and the Civil Rights movement and accompanied the decline of modernization theory.

Essentially, the dependency school recognizes that a system of non-autonomy exists politically and economically between polities, based on levels of development and on historical particularities (i.e., conquest, colonialism). Dependency theory assumes that 'satellite' polities experience their greatest economic growth in times when ties to a 'metropolis,' or political economic center, are weakest, and the most underdeveloped regions are those which had the closest ties to the metropolises in the past. By extension, the archaic institutions in the satellites are historical products from periods of capitalistic intrusion by the world metropolis, used beyond periods of abandonment by the world metropolis (So: 98).

Dependency is a general process, applicable to all 'underdeveloped' societies. This tenet seems to hold true for contemporary reindeer herding societies in most cases, since all reindeer herding population

were in some way and at some point colonized by other, more 'developed' societies. As an external condition, dependency is imposed from the outside. This is the critical difference between the modernization school and the dependency school, since modernization situates the causes for underdevelopment in the underdeveloped society itself. Fundamentally, then, dependency is an economic condition, since the surpluses of underdeveloped societies flow outward to developed societies, generally capitalist countries.

This inherently causes a condition of dependency, since economic viability is compromised with a decline in trade relations or potentials with developed societies. Reindeer herders are very much dependent on this external trade connection, especially in a contemporary setting which includes the post-Soviet economic organization of the Russian Federation. As well, dependency is a component of regional polarization, within which the influx of economic surplus into developed societies leads to the underdevelopment of economically peripheral societies. As Andre Gunder Frank states:

> They [underdeveloped economies] will not be able to accomplish these goals by importing sterile stereotypes from the metropolis which do not correspond to their satellite economic reality and do not respond to their liberating political needs. (1988: 119)

Therefore, the political economy of the periphery has been structured to benefit the core, leading to the development of underdevelopment (So: 105). With such conditions prevailing in the political economies of

reindeer herders, social change has taken on the characteristics of economic, and by extension, political dependency. Neotraditionalism (cf. below and Chapter 6) sought to disengage reindeer herding societies from this situation and establish equitable access to power over social organization and trade.

This dependency is based in the structures of the global economic system. In fact, Wallerstein (1992) suggested that there has been only one modern world-system, regardless if there had been others in the past. The merging of these systems, if they did in fact exist (see Abu-Lughod 1989; Chase-Dunn 1992; Frank and Gills 1992, 1993), set the stage for the emergence of globalization. The concept of globalization enables a multifaceted world-system analysis by moving the argument beyond the limitations of political economy, which lies at the basis of Wallerstein's conception of the one-and-only modern world system. Therefore, globalization is, and has been, a lengthy process, one that is not simply a phase of capitalism with a proliferation of media technologies which creates a so-called 'global village.'

Globalism is, instead, an adaptation of artifacts into multiple places at relatively the same time through the understanding of local traditions. Globalization does impact a population, transforming cultures and places, but these populations don't 'become' American, Norwegian, Russian, or whatever, but rather, they retain cultural elements from a diversity of local and global sources. Essentially, globalization is a matter of increasing long-distance interconnectedness across national boundaries and between continents (Hannerz 1996: 17).

Among reindeer herders this process of globalization is universally present in the contemporary world, and reindeer herders are integrated into the modern world-system. While many such populations retain their indigenous language and culture, most have been heavily impacted by the encompassing culture(s) of nation-state(s). Even in areas where indigenous practices are most heavily supplanted because of globalization, however, a hybridization, rather than a replacement, of culture is the rule. An excellent example of this came up in a conversation with an Iñupiaq resident of the Seward Peninsula. When questioned by a newcomer to his house if he was 'Iñupiat,' he replied, "Well, I don't know about that, but I *do* know that I'm an Eskimo!" His elderly mother, when asked the same question, replied, "Well, yes, I guess I am."

As Leo Ching acknowledges (2001: 295), the irregular impact of globalization across the world leads to a condition of "multicentric globalization." This polycentric dispersion of the contemporary world accounts *in part* for the variation in the rates of decline of numbers of reindeer and herders engaged in reindeer herding. Reindeer herders themselves have come to recognize their ability to effect change through non-governmental organizations (NGOs), maintaining complex relations with the state, the official public sphere, with international civil society initiatives, and with local communities (Appadurai 2001: 17). This process of globalization from below, or 'grassroots globalization,' enables local participation in the globalization process, and shows that

globalization is not being defined not only from above (Appadurai 2001:19).

Such local manifestations bring world-systems theory into conflict with concepts of globalization, though Wallerstein accounts for multiple locales of production by the spread of the European economic core across the planet (1990: 36). This potentially provides a core that generates demand for reindeer products. The real problem seems to lie in Wallerstein's assertion that the mechanisms of integration into the world-system are exclusively economic. This is clearly not the case universally. As well, the integration of cultures and polities into the world-system as a result of the expansion of that system, has not been convincingly demonstrated. This suggests maintaining a separation between world-system arguments and globalization theory. The two, however, remain compatible in that world-system theory addresses the phenomenological economic integration affected by capitalism, while globalization theory takes a more integrated nature, as outlined by Anthony Giddens:

> Globalisation can thus be defined as the intensification of worldwide social relations which link distant localities in such a way that local happenings are shaped by events occurring many miles away and vice versa...Local transformation is a s much a part of globalisation as the lateral extension of social connections across time and space. (1990: 64)

Reindeer herding societies, in particular, tend to occur in regions geographically or infrastructurally isolated from economic centers of

distribution and marketing. Consequentially, social integration of reindeer herding societies is less pronounced than societies with economies based on other products. This limits the economic viability of reindeer products within regional or global markets, but such isolation enables reindeer herding societies to maintain traditional lifeways longer than many other societies, and integration into national economies and polities occurs at a slower rate.

In addition to economy and economic structures, political processes play a critically important role in determining the continuing viability of reindeer herding. In the four cases studied, different political situations have led to different political economic conditions. For example, in Chukotka, political structures control most aspects of the political economy, and what little is produced beyond subsistence is controlled by an elite class of business-politicians (many of whom are former Communist Party politicians). This situation has improved somewhat since 2000, but such exploitation has seriously jeopardized the reindeer herds and critically impoverished their herders. One hundred kilometers away on the Seward Peninsula, government expropriation is much less pronounced, and most subsistence products and surpluses are consumed or marketed by the herders themselves, in spite of ecological changes which threaten some Seward Peninsula herds.

A Note on Traditionalism, Modernism, and Neotraditionalism

Reindeer herding and reindeer herding societies have been analyzed from the outside, usually by governmental structures, from a variety of perspectives. In each of the four case studies, governmental policies have been established and changed as the greater sociopolitical situation within the ruling nation-state has changed. This can be generally divided into three distinct manifestations in the twentieth century that can be applied to reindeer herders throughout the circumpolar North but is not unique to them: traditional, modern, and neotraditional. Of course, the manifestation of these trends takes different forms at different times in each of the four case studies and will be discussed in detail in future chapters.

The period perceived today as "traditional" prevailed during times when a market structure of the economy was in development political organization was relatively democratic. Generally, this time included the pre-Soviet period in Russia, the initial introductions of reindeer onto the Seward Peninsula, and what can be termed the 'subsistence period' among the Saami of Finnmark. Characterizing these periods is geographical isolation, the absence of transportation links, and limited colonization and mineral extraction by non-herding peoples.

Traditionalist policies have an early precedent in tsarist Russia's "Charter of Administration of Siberian Aliens" in 1822, which determined land use, self-government, and legal procedures for the northern peoples in general. The Charter of 1822 acknowledged that significant differences

existed between socioeconomic and sociopolitical structures between northern herders and hunters, and the Slavic majority of the Russian Empire. Traditionalist policies also have precedent in Committee of the North (1920s-1930s) which allowed for the creation of national and ethnic organs of local and territorial self-government. As well, the Committee of the North enabled clan-based soviets (nomadic and settled) to be created alongside territorial organs of power (Pika 1999: 23).

Modernism--attempts at changing cultures to promote assimilation into the dominant national culture--prevailed when command-administrative methods were intensified in the Soviet Union. Modernism emerged with the presupposition that national political economies were inherently superior in organization and efficiency, as were the cultural behaviors and structures of the dominant national culture. Significantly, paternalism persisted in modernist policies, with state organizations handling money and material for the northern peoples (which was often used for personal purposes). This policy was touted as the 'fatherly care of the state,' with little real awareness or concern for the needs of the people.

Neotraditionalism, by contrast, is a forward-looking social development policy. As Aleksandr Pika states (1999: 26), "Neotraditionalism is, firstly, a policy of developing northern native communities," though here development refers to progressive change rather than replacement of traditional techno-economic systems with supposedly universally superior forms. Neotraditionalism, then, is not a return to the past, but instead a re-evaluation of some of the better

policies of the past concerning political, social, and economic activities.

In addition, neotraditionalism encourages the development of new policies relevant to the current social situation and draws on the experiences of other circumpolar countries and international legal principles. These efforts should be traditionalist in nature, however, emphasizing native groups as distinct and unique entities (Pika 1996: 265). In summary, neotraditionalist policy calls for a list of fundamental changes in the way the nation-state interacts with native communities in the circumpolar North and is widely applicable to other sociopolitical situations. Neotraditional policies, however, have yet to be successfully promoted to any national government. For a more in-depth discussion of neotraditionalism, see Chapter 6: Reindeer Herder Relations With the State and Industry.

Comparative Method

Ethnographic research requires methodological approaches, and, some methods are more appropriate than others depending on the subject being studied. This thesis is primarily a comparative study of specific cases, combined with a period of participant observation, carried out in Chukotka, Russian Federation from late September to late November, 1998. Limited access to field sites is supplemented by ethnographic data of other researchers, providing the basis for a comparative method. This method allows for a juxtaposition of different social and cultural patterns, which will reveal that specific differences

between cases are not random, but that some factors affecting the socioeconomics of reindeer herding vary together and across societies and cultures (cf., below). Therefore, this study combines participant observation with comparative methodology within a theoretical framework based on socioeconomic and sociopolitical theories of culture change (cf., Theoretical Approaches above).

The comparative method became a basic scientific approach in the nineteenth century. Anthropological comparison has both historical and scientific goals through the creation of inferential histories, the construction of typologies, generalizations and laws, and generalized processes. Within the comparative method, a unit of comparison is the totality which is the point of reference for another totality (i.e., unit) of a similar nature. An item of comparison is the part of the unit that is actually used for comparison (Sarana: 118). Fundamentally, then, comparative method is an abstracted and therefore imperfect but powerful method that suggests implications, critiques, and systematic analysis of how global patterns develop (Peacock 2002: 65).

Comparison in the narrow, if well established, sense of a 'hard-science' methodology, however, employed to support some universal theory or meta-narrative, is rejected, as per Fox and Gingrich (2002: 1). Instead, an alternative concept of a plurality of comparative methods is promoted. Ladislav Holy, too, points out that, due to paradigmatic shifts in anthropology, the objectives and techniques for comparison have so diversified that there really is no longer a "comparative method" in anthropology, but rather an array of styles of comparison (1987: 2).

Indeed, R. H. Barnes claims that anthropology is permanently in crises about the comparative method (1987: 119).

In a study of the socioeconomic system of reindeer herding, the reindeer economy, including its herders and reindeer, represents the unit, and the items of comparison include herd sizes, herd health, reindeer products (including meat, antler, fur, and in some cases, milk), profits, capital base, market accessibility, and ecological and political considerations. Therefore, institutions and their traits comprise the foci for a comparison of reindeer herding systems. By comparing these foci, based in the same unit of comparison (the economy of reindeer herding and its institutions), generalized processes will be revealed. This comparison depends on drawing boundaries, which is intrinsic to establishing contexts (Melhuus 2002: 87).

One of the most important goals of comparative method is the construction of typologies, which can be divided into descriptive-analytical and historical-developmental forms. Descriptive-analytical typology seeks to compare contextually synchronic phenomenal reality, while historical-developmental typology focuses on diachronic factors and includes historical-index and whole-culture sub-types. These typologies are attained through the use of four aspects of comparative method, including techniques, goals, items and units, and areal coverage (Sarana: 119). Furthermore, in addition to being a fundamental human cognitive activity, comparison in a more specific sense is basic to all anthropological research that involves cultural translation. Translation implies analyzing and representing human activities and relations in one

sociocultural context for audiences in a sociocultural setting, which may intersect only to an extent with the first (Fox and Gingrich 2002: 8).

Considering the subject matter of this dissertation, the globalized world creates a distinctive opportunity for comparison (e.g., the comparative method). In fact, James Peacock (2002: 44) argues that anthropology is at an appropriate moment in its history to seize this opportunity, and in doing so, comparison can be usefully engaged with issues in the world. This applies as well to a comparative study of the socioeconomic shift currently affecting reindeer herding and is inherently an inquiry into the emergence of globalization. Andre Gingrich states:

> Empirically, the value of comparative concepts lies in their potential to identify and explain other dimensions of specific local-global processes and to situate specific local-global processes in wider contexts more effectively than 'thick' or 'finely textured' descriptions and analyses alone were able to carry out. (2002: 244)

Gingrich (2002: 227) also points out that individualization of risk and globalization beyond the reach of democratic control are interrelated aspects of the same process (globalization).

The weaknesses of the comparative method for this particular study are few, though one problem lies in the difficulty in obtaining comparable data for all factors for all four cases. While this was eventually overcome, it forced emphasis on a few particular factors, which are detailed below. Defining units of analysis relevant to the question of variable economic decline was also difficult in this context,

though once decline-inducing factors were identified, comparison was made more useful. Furthermore, such comparisons clearly revealed how various factors affect different cases, demonstrating specific local-global processes.

The factors chosen for comparison include ecological concerns such as the role of wild reindeer/caribou, the impact of predators, the occurrence of iced-over pasture (icings), loss of pasture (or access to pasture), overall number of reindeer in a region, and herd size. Economic factors include profitability of reindeer products (specifically meat, antler, and "other," including pelage, milk, and handicrafts), infrastructural development, and number of enterprises or herding operations. Political factors include local, regional, and national management, involvement in international organizations, granting of government subsidies, and customary and (nation-) state law. Finally, the historical tradition of reindeer herding among the herders of the case studies was taken into consideration, along with the reproduction of herding knowledge.

The ecological, economic, political, and to a lesser extent, social frameworks were chosen based on their relevance to the central thesis of this dissertation, which asks why reindeer herding is universally in decline in the circumpolar North, though at different rates. These frameworks of variables were also chosen because the question asked is essentially an economic one, with relevant and unavoidable connections with other cultural processes. In this dissertation, then, the economic

framework serves as the basis for a wider comparative investigation including political, economic, and social frameworks.

The largest unit of analysis, the four cases themselves, form the foundation of this comparative study. Though presented in detail in the next chapter, a brief explanation for their choice is appropriate here. Two neighboring populations of reindeer herders in two very distant areas have been selected, including in the West the Saami of Finnmark, Norway and the Saami of the Kola Peninsula, Russia. In the East, the neighboring reindeer herding populations of Chukotka, specifically the Chukchi of the Chukotskii Peninsula, and the Iñupiat of Alaska's Seward Peninsula, Russia, were chosen as case studies. Neighboring reindeer herding populations dwelling in different nation-states were chosen to enable a clear distinction between factors inducing decline. Furthermore, the cultural closeness of the Kola and Finnmark Saami, and the cultural separateness of the Chukchi and Iñupiat, provided opportunities to compare and starkly contrast other sociocultural factors presented above. Finally, I chose these cases in part based on prior field work (in Chukotka) and because of my background of significant prior academic study of these populations.

SUMMARY

Reindeer herding in the last decade of the twentieth century has undergone rapid and severe changes in scale. These changes are economic in nature. The comparison of economic institutions with

others reveals patterns of change. In this dissertation, this is done within the context of globalization in general, and with a juxtapositioning of reindeer herding as a domestic mode of production with the role of reindeer herding in the global, capitalist world-system. This is especially useful for the time period covered here, which follows the demise of the Soviet Union and the rapid incorporation of all reindeer herders into the global economy, at least at some point and to some degree. What follows is an in-depth account of the processes of culture change and their consequences on reindeer herding economies and populations.

CHAPTER 3

THE CASE STUDIES: CHUKCHI, IÑUPIAT, AND SAAMI

INTRODUCTION

An introduction of the dissertation's four case studies provides the subject basis for research, Each of these case studies possesses similarities and differences to the others which are relevant to the trends of decline, and account for differences in this decline. This inquiry provides evidence for factors of change at different rates and types from the local to the global perspective across time. As well, ecological concerns, particularly at the local level, are addressed. Because these factors of change are largely ecological, economic, and political, focus is on these aspects of reindeer herding.

In the following chapter an overview of the current state of reindeer herding in the circumpolar north will be provided to illustrate overall trends in reindeer herding. These trends include herding strategies, resource disposal and dispersion, and integration into local and regional economies. While this will provide a glimpse of the overall trends in reindeer herding worldwide, specific analyses of certain herding societies will provide a detailed account of the institutional changes and adjustments in particular cases.

These case studies are then analyzed comparatively in later chapters to reveal specific cause and effect situations that led to current

conditions. A critical analysis of these conditions will further enable an understanding of positive and negative trends in disparate regions where reindeer herding is practiced, allowing for an assessment of continued viability under specific conditions. Each of the four case studies used for this endeavor is introduced below.

The four regions chosen as case studies include Finnmark *Fylke* of the Kingdom of Norway, the Russian Federation's Kola Peninsula (Murmanskaia Oblast'), the Chukotskii *Raion* of the Chukotskii *Avtonomnii Okrug*, and the Seward Peninsula of Alaska, United States. Therefore, this study includes two "macroregions," each of which contains two "microregions." To enable easier reference, the two macroregions will be referred to as the "South Barents Shores," including the Saami of Finnmark and the Kola peninsula, and the "Bering Strait Peninsulas," including the Chukotskii and Seward Peninsulas.

Regionally, this allows for the comparison of two reindeer herding areas, in which two very different political or cultural systems prevail. This enables an ecological comparison of the two focus areas of the same region apart from and in relation to existing sociopolitical systems. Discussion will proceed from west to east beginning in Finnmark, then to the Kola Peninsula, then to the Chukotskii Peninsula, and finally to the Seward Peninsula.

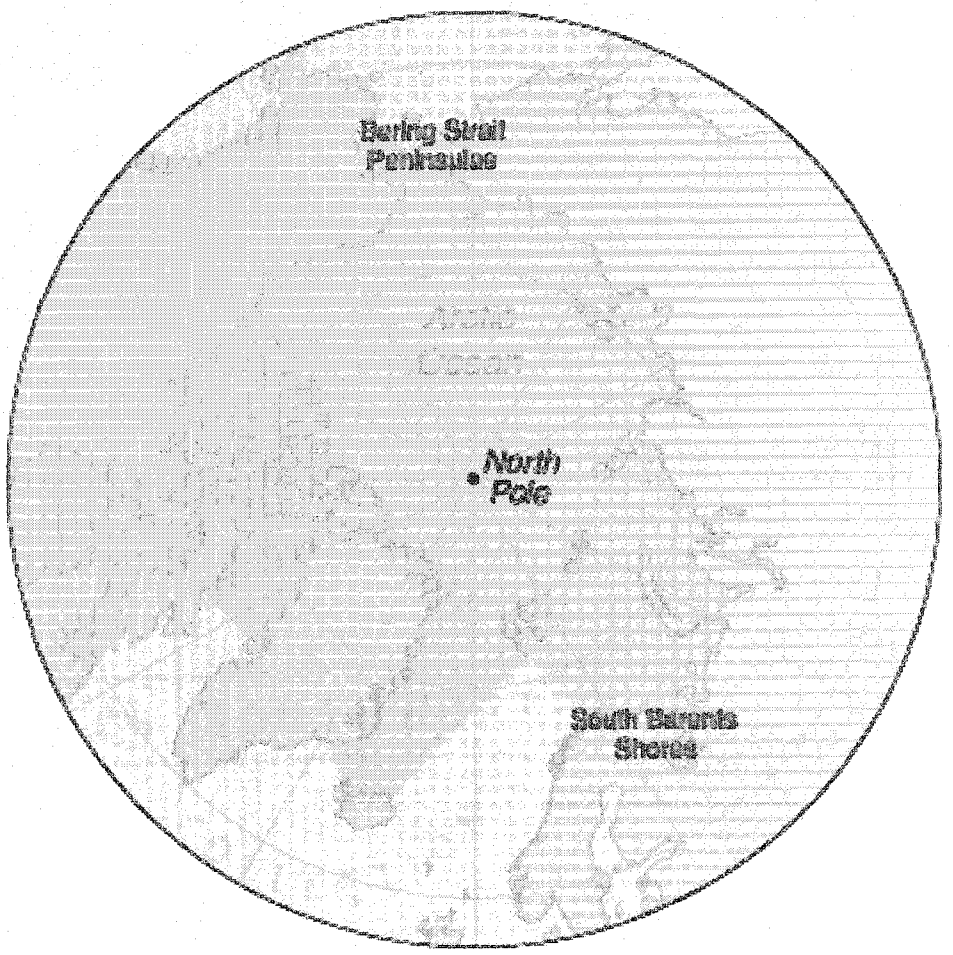

Figure 1. The Circumpolar North and Case Study Regions. (adapted from Central Intelligence Agency map at the Perry-Castañeda Library, University of Texas)

OVERVIEW OF CASE STUDIES: SOUTH BARENTS SHORES

The first of the two macroregions included in this thesis is the "South Barents Shores," including Finnmark and the Kola Peninsula. Unlike in the "Bering Peninsulas" macroregion, the South Barents Shores includes the presence of a single ethnic group throughout: the

Saami. The Saami are also called *Sami*, Laps, Lapps, and Laplanders, and the lands they traditionally inhabit are known as Lapland, or *Sapmi*. Their autonym is *Saam'* (pl., *Saamm'lja, Saemieh*). Many other national and ethnic groups are also present in this region, however, and it is largely their relations with the indigenous Saami that have characterized the condition of Saami reindeer herding both historically and contemporaneously.

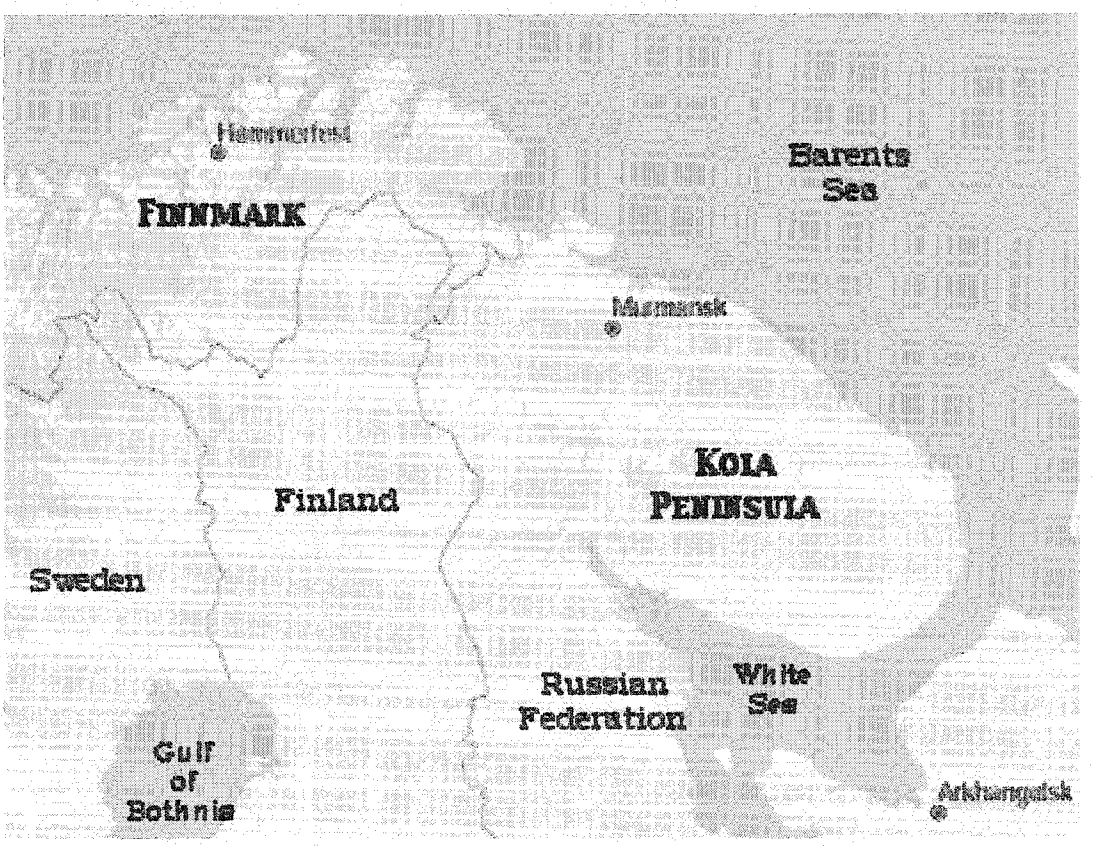

Figure 2. The South Barents Shores (Finnmark and Kola Peninsula). (adapted from www.multimap.com map)

The Saami are a northern European people with a population of approximately 66,500 (Beach 2000: 223). They inhabit the sub-Arctic and Arctic regions of Finland, Norway, and Sweden, and the northern two-thirds of Russia's Kola Peninsula. Linguistically the Saami language belongs to the Balto-Finnic group of the Finno-Ugric sub-family of the Uralic language family. Other languages of the Balto-Finnic group include Finnish (not mutually intelligible with Saami, yet still its closest relative), Estonian, Karelian, Levonian, Veps, and Votian. The Saami language is divided into a number of distinct dialects, some of which are considerably different from the others. Some count three distinct languages: East Saami, Central Saami and South Saami, with Central Saami including North Saami, Pite Saami and Lule Saami. In other accounts as many as eleven Saami languages are listed. Not all ethnic Saami speak their language, with approximately 20.000 in Norway, around 3,000 in Finland, 10,000 in Sweden, and about 1,000 in Russia. Most Saami speakers speak dialects of North Sami. Often, the dominant languages of the nation-states in which the Saami live are used for communication between Saami of differing dialectical groups (Beach, 2000: 224).

While the Saami possess no independent polity of their own, a Saami national identity has gradually emerged, leading to the development of pan-Saami institutions, both national and transnational. These include, among others, the Saami Friends, the Saami Council, the National Saami Association, and the *Sámediggi* (Norwegian: *Sametinget*), or Saami Assembly. During the 1970s, political

activity among the Saami grew in frequency and intensity, especially in Norway. Attention among the Saami in Norway was therefore directed more to the aspirations of the National Saami Association. As well, the Saami Council involved itself internationally, for example in the World Council of Indigenous Peoples (Jernsletten 1995: 4). The *Sámediggi*, too, is active internationally. These political institutions will be discussed in greater detail in later chapters.

The conditions of Saami herding today are similar to conditions in other regions where pastoral nomads are incorporated into national economic systems. The imposition of 'rational' herding techniques has forced a severe redefinition of social structure and resource definition. Rational herding techniques are usually defined as herd maximization through ranching techniques with emphasis on quantity over quality to supply a market. Increasingly, pastoralists are dependent on the national governments ruling their territories for economic well-being. While this seems to be simply an accelerated version of the ever-present trend among pastoral nomads towards sedentarization, the social disruption caused by it is leading to a breakdown of cultural identity in many areas.

Most reindeer herders were semi-nomadic, often moving between the coasts and the highland plateaus. Though the reindeer-herding Saami remained relatively isolated from the influences of non-Saami, their pastoral mode of food-producing existed for a dual-purpose: to supply the *siida* with the necessary surplus of subsistence resources to acquire luxury-prestige goods, and to supply the non-Saami with taxes.

This system allowed for continued non-Saami dependence on resources traditionally supplied by Saami socioeconomic activities (i.e., furs and fish), and also reinforced Saami dependence on the regional economy of Scandinavia and Europe. This is an ongoing trend. Finally, through the development of Saami dependence on foreign trade, Saami *sïda* were gradually being incorporated into the national economies and territories of the Fennoscandian nation-states and Russia.

Today, within the Saami minorities of the Fennoscandia region, reindeer herders are themselves a minority. Nevertheless, it is the interaction of nation-states with reindeer-herding Saami that overwhelmingly forms the basis of state policy (Beach 2000: 229). This occurs in spite of a mixed tradition of economic diversity, a survival strategy well-suited to the Arctic and which involves the spread of risk by the utilization of a wide range of local resources.

The Saami have largely maintained their distribution throughout Fennoscandia[7], in spite of the colonization of most regions by Finns, Norwegians, and Swedes. During the late medieval and early modern periods, Fennoscandian Saami possessed few legal or martial protections, and generally were forced from lands desired by the agriculturist colonists. During the post-World War Two era, and especially in the last two decades of the twentieth century, the Saami of Fennoscandia have largely been the nexus of organizing efforts to secure

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[7]The term Fennoscandia includes the lands which comprise the constituent parts of Finland, Norway, and Sweden. Finnmark lies at the northeasternmost part of this region.

traditional rights to resources necessary to enable the continuation of reindeer herding, which remains an integral part of Saami culture and identity. The *Sameting* (Saami Assembly) (*Sámediggi*; *Sámiráðði*), created in 1989, followed the precedent of a similar organization in Finland (1973), and has worked with other Saami institutions and international organizations to secure traditional rights to land usage, including retaining the right to cross international boundaries with herds. These institutions will be discussed in more detail in later chapters.

Physical Environment of Northern Sapmi

The regions of Fennoscandia traditionally inhabited by the Saami stretch for over one-thousand miles from east to west, including the northern two-thirds of the Kola Peninsula (*Kol'skii Poluostrov*) of Russia (*Murmanskaia Oblast'*), the northern fifth of Finland, the northern regions of Sweden, particularly Norrland and Västerbotten, and most of Norway north of Trondheim. Topographically, Sapmi includes forest, mountains, tundra, and fjord-indented coasts. The most prominent feature of Saapmi is the rugged highlands that dominate the topography of most of Norway and northwestern Sweden with peaks exceeding 3,000 meters. In the farthest north, on the Kola Peninsula and in Finnmark *Fylke* of Norway, these mountains form large plateaus. Peaks on these plateaus regularly exceed six hundred meters and some reach as high as 1,300-1,400 meters. The *Kejvy* (Kola Plateau) and *Finnmarksvidda* (Finnmark Plateau) average approximately five hundred meters in

elevation, with a range from below two hundred meters to above six hundred meters.

Climatologically, the South Barents Shores region area can be best divided into two parts: the coastal highlands and islands, and the inland plateaus. The climate of the coastal highlands and islands can be described as "half-Arctic," with the warm Gulf Stream significantly moderating temperatures. The ground is usually covered with snow from October to May, though this can vary. The snow-cover in the east lasts longer than in the west. Winter temperatures on the coasts may reach -35° to -40° centigrade, with the average January temperature at -10° centigrade. On the average there are two-hundred days a year below freezing.

Coastal summers are short and warm, with the average July temperature at +12° centigrade and sometimes reaching +30° centigrade in July or August. The presence of the midnight sun and the relatively warm summers allow for the rapid growth of grass and some crops. On the plateaus of the Kola Peninsula and Finnmark, the snow-cover lasts, as on the coast, from approximately October to May. Winter temperatures average about -14° centigrade in January and February, and summer temperatures average about +13° centigrade in June with extremes of -48° and +31° in winter and summer respectively. The inland tundra region is generally drier and colder than the mountainous coast, with less snowfall but usually with a longer snow cover (Anderson 1979: 141-146).

According to Anderson (1978: 148), most species of animal life found on the coasts also live in inland regions, and can therefore be discussed without geographic reference. Predatory animals include the brown bear, lynx, wolf, and wolverine. Today most of these species barely survive in the area, having been severely depleted during the period of fur trapping and later for the protection of reindeer herds. Non-predatory animals include the red deer and the reindeer, in both wild (caribou) and domesticated (reindeer) forms (the wild until about 1918). Other animals of the region are the blue hare, Arctic and red fox, stoats and weasels, squirrels and lemmings, as well as other small rodents, and formerly the beaver, otter, sable, and pine marten, all severely or completely depleted during the period of fur-hunting circa A.D. 1600 (Anderson 1979: 850).

Other smaller animals including rodents and, of course, insects are present in the South Barents Shores region but are not particularly relevant to reindeer herding except as pests. Biting insects, including mosquitoes, botflies, and black flies (Diptera), harass both reindeer and people, especially from spring to summer, as they do throughout the circumpolar North. In particularly bad instances, larvae from botflies can burrow into the skin of a reindeer, making it sick and leaving its skin full of holes.

The Saami

The Saami of Finnmark *Fylke* of the Kingdom of Norway is the first of the case studies. The Saami have a significantly different historical

experience than other reindeer herding populations and are relatively integrated into the overarching political states in which they dwell. The Saami of Scandinavia in general, and of Finnmark in particular, have largely led the way towards increasing autonomy economically, politically, and perhaps most importantly, judicially. This sociocultural change is ongoing and is well documented (Anderson 1986, 1987; Beach 1988, 2000; Brøsted 1987; Eidheim 1971; Fox 1998; Hansegård 1978; Ingold 1978; Kalstad 1998; Korsmo 1996; Oskal 1999; Pelto 1987; Skonhoft 1998).

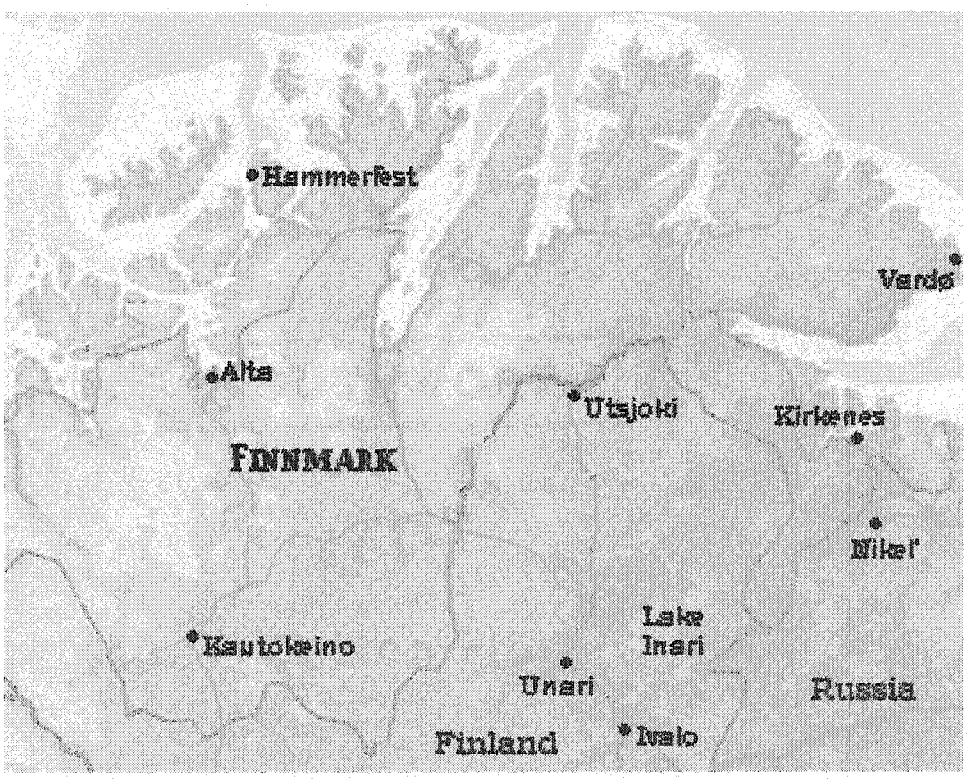

Figure 3. Finnmark County, Norway.
(adapted from www.multimap.com map)

Though the politically and culturally dominant Norwegian culture has long been in contact with the Saami, relations between these two groups has been variable historically, further complicated by the political subservience of Norway to Denmark and Sweden prior to the twentieth century.

The Saami of the Kola Peninsula of the Russian Federation, the second of the case studies, inhabit the South Barents Shores region and are affected by most of the same natural processes which affect Finnmark. The political economic situation of the Kola Saami, however, was radically different from that of Finnmark, especially during the Soviet period (Beach 1992; Konstantinov 1997, 1998, 2000, 2002; Luk'ianchenko 1991; Sergejeva 2000; Volkov 1996). Today, very significant differences persist, largely connected to the former Soviet organization of herds into "brigades" of herds and reindeer into *kolkhozy* and *sovkhozy*.[8] Besides the process of collectivization, a program of forced centralization was imposed by which Saami and others were relocated to larger towns. During this period, and due to the mixing of cultures in the urban centers, indigenous language was largely lost and replaced with Russian.

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[8]The two forms of collectivized agriculture included the *kolkhoz* (abbreviation for *kollektivnoe khoziaistvo*), "collective productive enterprise," which were based on collective management and sharing of productivity, and the *sovkhoz* (abbreviation for *sovietskoe khoziaistvo*), "soviet productive enterprise," in which production was more intensive and workers were treated as wage-laborers employed by the state.

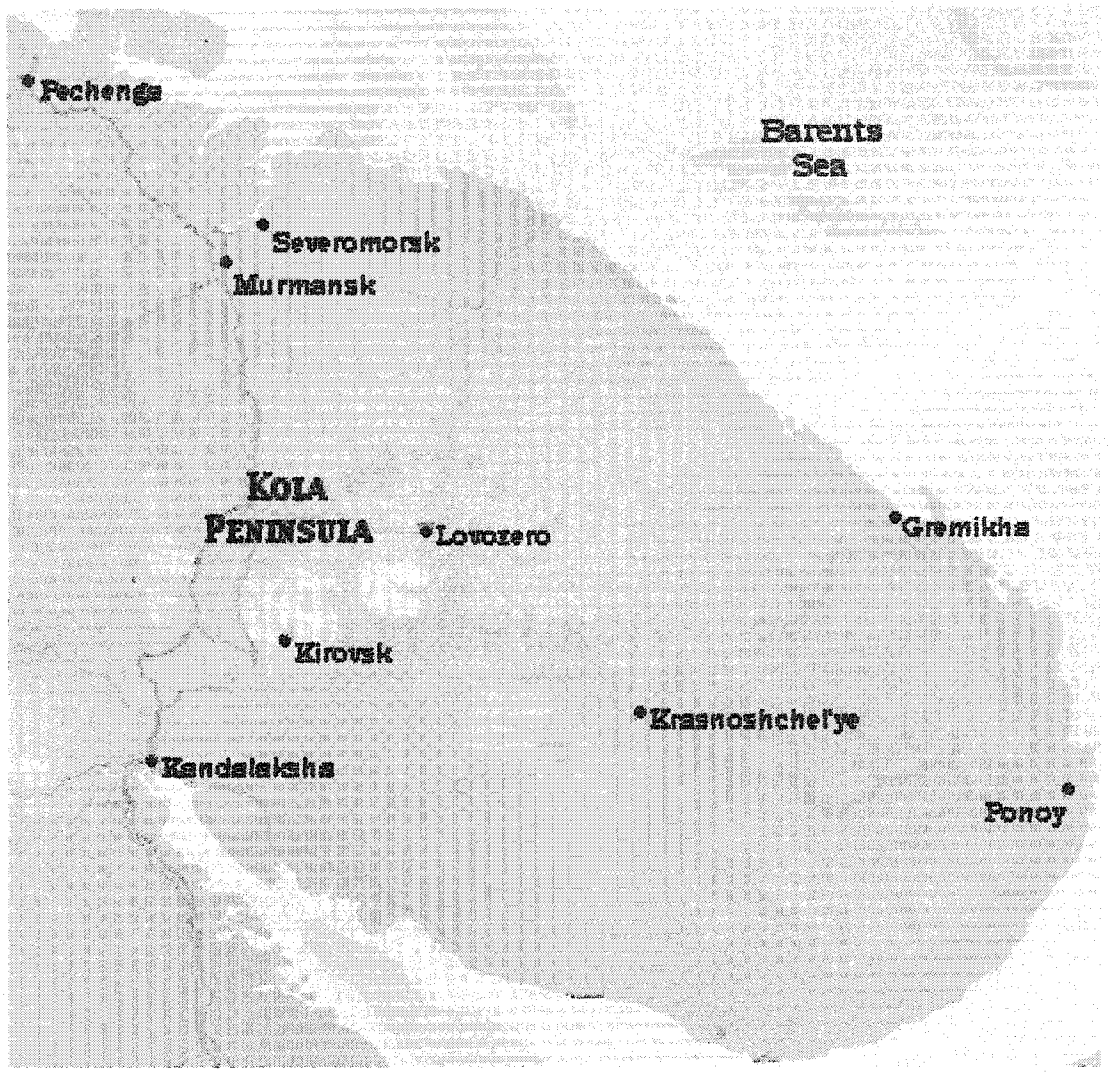

Figure 4. Kola Peninsula, Murmanskaia Oblast', Russia.
(adapted from www.multimap.com map)

The Saami inhabit a wide ecological region of tundra plateaus and coasts stretching from Norway across Sweden and Finland to Russia's Kola Peninsula. This territory includes Finnmark, and within Norway in general, the land is divided into "herding districts" which correspond to summer grazing areas and are largely based on Saami traditional use-

areas (Beach 2000: 231). In autumn and winter, herders tend to fragment into smaller traditional groups known as *siida* or *sita*, in which the tending of herds becomes more intensive. Within Sapmi (Lapland), the siida, based on a village and its territory, is the fundamental sociopolitical unit. The siida today is a group of reindeer herders and their families who herd, work, and move together in autumn or winter. In Finnmark, as in most of Norway, herding in these areas is limited to the Saami, and it is the tradition of herding that forms the basis of much of the customary law used legally to delineate Saami rights.

The Saami of Finnmark and Kola: Common Historical Issues

The first written evidence of Kola Saami dates from the 9th century when the same Ottar mentioned above described the Kola peninsula and the local *Terfinnas* ("country" or "wild" Finns). Descriptions provided by the Dane, Saxo Grammaticus, date from the 12th century and describe the Saami as good archers, skiers, sorcerers, and fortune-tellers. Besides these early descriptions, little was known of the Saami from the European perspective, and only in the Late Medieval and Early Modern periods did contacts between Saami and other populations become routine.

The peripheral position of the Saami as suppliers of raw materials (i.e., furs, meat, and fish) to the larger European market core must be taken into consideration in relation to historical development and patterns of settlement. Also, Saami perceptions of ownership and usage

rights of resources within the territory of a band/household (*siida, sii'da, sita*) is important to the understanding of the strategies employed to extract and utilize resources. The sixteenth century is used here as the approximate time that the gradual shift from reindeer hunting to reindeer herding accelerated and proliferated.

By contrast, there was a definite shift in Saami settlement patterns and subsistence activities during the seventeenth century, accompanied by a moderate involvement in the market economy of Europe. The primary settlement pattern shifted from large camps with relatively high populations to smaller, seasonal camps with several seasonal dwellings inland, and small sedentary camps in coastal areas. The camps of the pastoral Saami became increasingly dependent on the mobility required to herd reindeer, and therefore became smaller (Beach 2000: 227). In addition to the increase in the use of domesticated reindeer, use of domesticated cattle among the sedentary coast-dwellers, some of whom were shifting increasingly from fishing to agriculture, also grew. As this occurred, many Saami shifted from traditional Saami house-forms to more permanent Nordic-Finnic-Russian types.

The new conditions described above persisted from the seventeenth through the eighteenth century and included a gradually increasing involvement by the Saami in the European market system. The resulting dependence on the market economy furthered the sociocultural distance between the coastal Saami and the inland Saami, and would influence the socioeconomic shift of the inland Saami from hunting to herding. Due to their proximity to economically dominant non-Saami cultures,

the coastal Saami have been in part assimilated into the encapsulating nation-states of Sapmi. Furthermore, as fur-bearing species dwindled, more emphasis was placed on the domestication of reindeer, primarily in interior regions, and the introduction of cattle in coastal regions to supplement the agricultural or marine subsistence activities of the coastal Saami.

The increase of sedentarism in coastal areas allowed for the development of multi-roomed houses in which the animals were kept separate from the human living spaces. The increasing economic importance of domesticated reindeer and cattle was reinforced by non-Saami demands for animal products, the decline or extinction of non-domesticated animals, and the desire of the Saami to acquire prestige-goods. While animals have long been kept in the dwelling areas of the Saami, the increasing numbers of domesticated animals reinforced the expansion of protective shelters.

In addition to an increase in house size, the socioeconomic shift from hunting to herding reinforced the trend towards smaller communal settlements, with a need for an increasing control of territorial resources. As a result, the already semi-sedentary coastal groups, who remained dependent on marine resources, were able to maintain the largest settlements. Where reindeer domestication and shifts to pastoralism occurred, populations were necessarily smaller, which prevented an overexploitation of resources. In coastal areas, however, sedentarism and increasingly stable access to food and trade resources supported larger, increasingly ethnically mixed populations.

Most reindeer herders remained semi-nomadic, often moving between the coasts and the highland plateaus. Though the reindeer-herding Saami remained relatively isolated from the influences of non-Saami, their pastoral mode of food-producing existed for a dual-purpose: to supply the *siida* with the necessary surplus of subsistence resources to acquire luxury-prestige goods, and to supply the non-Saami with taxes. This system allowed for continued non-Saami dependence on resources traditionally supplied by Saami socioeconomic activities (i.e., furs and fish), and also reinforced Saami dependence on the regional economy of Scandinavia and Europe. This is an ongoing trend. Finally, through the development of Saami dependence on foreign trade, Saami *siida* were gradually being incorporated into the national economies and territories of the Scandinavian nation-states and Russia.

In Russia, as late as 1917, the Saami were also found throughout the Kola Peninsula. By 1926 the Kola Saami lived mostly in four Russian Orthodox parishes: Kola-Lapp, Aleksandrovo, Ponoi and Lovozero (*Luyavr*). Their territory has considerably diminished since the inception of collectivization, mandated by the Communist Party and enforced by the Soviet government. By 1989 the majority of the Kola Saami and their reindeer lived in the Lovozero National District, which makes up slightly over one-third of the Murmansk Region (*Murmanskaia Oblast'*).

Following the 1991 dissolution of the Soviet Union, severe economic instability and uncertainty have become commonplace, and the Kola Saami's adjustment to these conditions has led to increased

contacts with Saami from other nation-states and to a realignment of economic structures to work within the new Russian economy. This is coupled with the presence of and cooperation with other herding peoples on the Kola Peninsula such as the Komi, Nentsy, and ethnic Russians, Ukrainians, Pomors (White Sea littoral Russians), and others, all of whom pursue similar endeavors, and which makes the Kola Saami's situation unique when compared to the Saami of Finland, Norway, and Sweden.

Most recently, this situation has changed due to the dissolution by the Russian government of the collective *sovkhozy* reindeer farms which employed many Saami as wage-laborers. While the collective nature of the formerly state-owned farms has been retained, the state is no longer responsible for setting production goals or developing and maintaining markets within which reindeer products may be sold. Currently, most products resulting from Saami reindeer herding enterprises on the Kola Peninsula are sold to foreign markets, and much effort has been spent to build slaughterhouses which qualify for certification from the European Union, thus opening a new potential market (Beach 2000: 232).

Today, within the Saami minorities of the South Barents Shores region, reindeer herders are themselves a minority. Nevertheless, it is the interaction of nation-states with reindeer-herding Saami that overwhelmingly forms the basis of state policy (Beach 2000: 229). This occurs in spite of a mixed tradition of economic diversity, a survival strategy well-suited to the Arctic, and which involves the spread of risk by the utilization of a wide range of local resources.

The Saami and their Neighbors: A History of Culture Contacts

The Saami have largely maintained their distribution throughout Fennoscandia, in spite of the colonization of most regions by Finns, Norwegians, and Swedes. During the late medieval and early modern periods, Fennoscandian Saami possessed few legal or martial protections, and generally were forced from lands desired by the agriculturist colonists. During the post-World War Two era, and especially in the last two decades of the twentieth century, the Saami of Fennoscandia have largely been the nexus of organizing efforts to secure traditional rights to resources necessary to enable the continuation of reindeer herding, which remains an integral part of Saami culture and identity. The *Sameting* (*Sámediggi*; *Sámiráðði*), created in 1989, followed the precedent of a similar organization in Finland (1973) and has worked with other Saami institutions and international organizations to secure traditional rights to land usage, including maintaining the right to cross international boundaries with herds.

Besides the Norwegians and Saami of Finnmark, a significant population whose first language is Finnish lives in Finnmark. By the end of the nineteenth century an enormous migration of ethnic Finns moved north from Finland. A severe famine in Finland caused these people to leave for the fish-rich coasts of Finnmark. These Finns (or *Kvæner*, *Hwener*, *Birkarler*, as they were called) kept their language and traditions, and there are still people in Finnmark with Finnish as their mother-tongue.

Conflict between these different ethnic groups has been pervasive throughout the last two to three centuries. The different lifestyles of the Norwegians and Saami have especially triggered conflicts that often have led to the oppression of the Saami by their Norwegian rulers. This same pattern can be seen on the Kola Peninsula, where contact with Russians and other subject peoples was accelerated under Tsarist Russia and continued through Soviet times.

OVERVIEW OF CASE STUDIES: BERING STRAIT PENINSULAS

The second of the two macroregions to be considered in this dissertation is the "Bering Strait Peninsulas," including the Chukchi and Seward peninsulas. Here, two very different cultures, with widely variable sociopolitical conditions historically, practice reindeer herding. These include the Chukchi and the Iñupiat cultures of the Bering Strait region. The Chukchi historical autonym is *Luoravetlan*, though "Chukchi" or occasionally "Chukchee" is used almost universally in common practice and in academic literature. Additionally, the term *Anqallyt* (coastal man) refers to the coastal Chukchi and *Chavchu* (reindeer man) refers to the tundra Chukchi.

Iñupiat is the autonym for the Eskimos of northwestern and northern Alaska, including the Seward Peninsula. Since the use of the name "Iñupiat" has become widely familiar in academic literature, this name will be used in place of the more commonly used "Eskimo." Note that the Golovin Bay region of the Seward Peninsula was until relatively

recently inhabited by speakers of Central Yup'ik, but during the temporal scope of this study (the last ten years), Iñupiaq speakers far outnumber Central Yup'ik speakers.

Also included in this region are other nearby groups including the Siberian Yup'it of St. Lawrence Island and the coasts of the Chukotka Peninsula (though coastal dwellers are usually sea-mammal hunters exclusively or in addition to being reindeer herders), the Central Yup'it of Nunivak Island, and in Chukotka, the Even and Koriak, though rare on the Chukotka Peninsula. In addition to these reindeer herding peoples, Russian and American cultural presence and influence throughout the region has been significant and today comprises the most numerous population groups in urban centers.

Two very different experiences led the Chukchi and the Iñupiat to reindeer herding, and consequentially, herding is quite different between these two peoples. While herd management and access to resources will be discussed in detail in later chapters, an introduction to the emergence of reindeer herding is needed here to provide a basic understanding of that institution among the Chukchi and Iñupiat. Unlike the Saami, who were very early connected into an essentially European system of trade as peripheral suppliers of raw materials, the Chukchi, and later the Iñupiat, primarily herded reindeer for subsistence, only later producing for outside markets. Among the Chukchi, this shift was gradual, but among the Iñupiat, change occurred rapidly.

The Physical Environment of the Bering Strait Peninsulas

The Bering Strait Peninsulas region includes the Chukotka and the Seward Peninsulas and the many islands in between. Of the Bering Strait islands, only on Saint Lawrence Island is reindeer herding practiced, though the Central Yup'ik of Nunivak Island, approximately 320 kilometers to the southeast, also practice reindeer herding. The region is typified by ice-pack in the winter, though late into November the region continues to experience warming and refreezing periods due to warm-water ocean currents. It is this situation which causes the

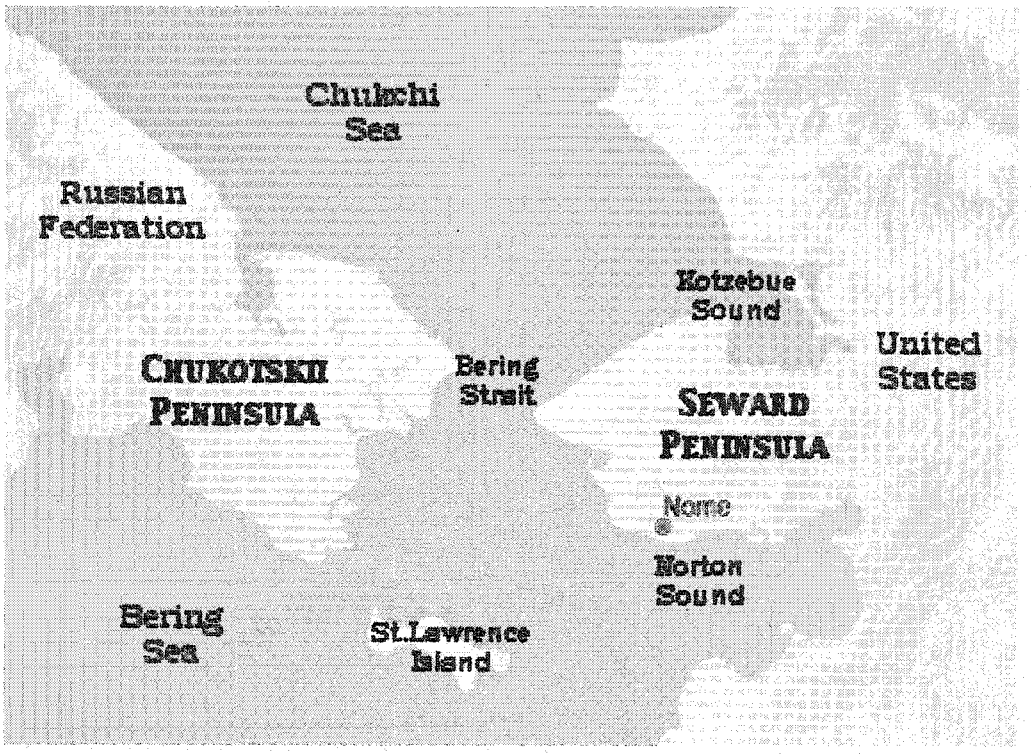

Figure 5. The Bering Strait Peninsulas.
(adapted from www.multimap.com map)

phenomenon known as "icing," during which the melting and refreezing of snow creates a blanket of ice on the tundra pastures, making it very difficult for reindeer to reach the vegetation below. Icing is more common on the Chukotkan side of the Bering Strait than on the Seward Peninsula.

The Chukotka Peninsula is a part of the larger region of the Russian Far East known as Chukotka, or more formally, the Chukotka Autonomous Region (*Chukotskii Avtonomnyy Okrug*). The region is bordered by the Arctic Ocean (East Siberian Sea and Chukchi Sea) to the north and by the Pacific Ocean (Bering Sea) on the east. It borders on the Magadan Region (*Magadanskaia Oblast'*) and the Sakha Republic (*Respublika Sakha*) in the west and is bordered by the Koriak Autonomous Region (*Koriansktiy Avtonomnyy Okrug*) to the south. Chukotka is located over 3,600 miles away from Moscow, farther than any other region of the Russian Federation. The area of Chukotka is 737,000 square kilometers (Schweitzer and Gray 2000: 19), though the Chukchi Peninsula itself contains less than 70,000 square kilometers (from Zaliv Kresta and the Vankarem River east).

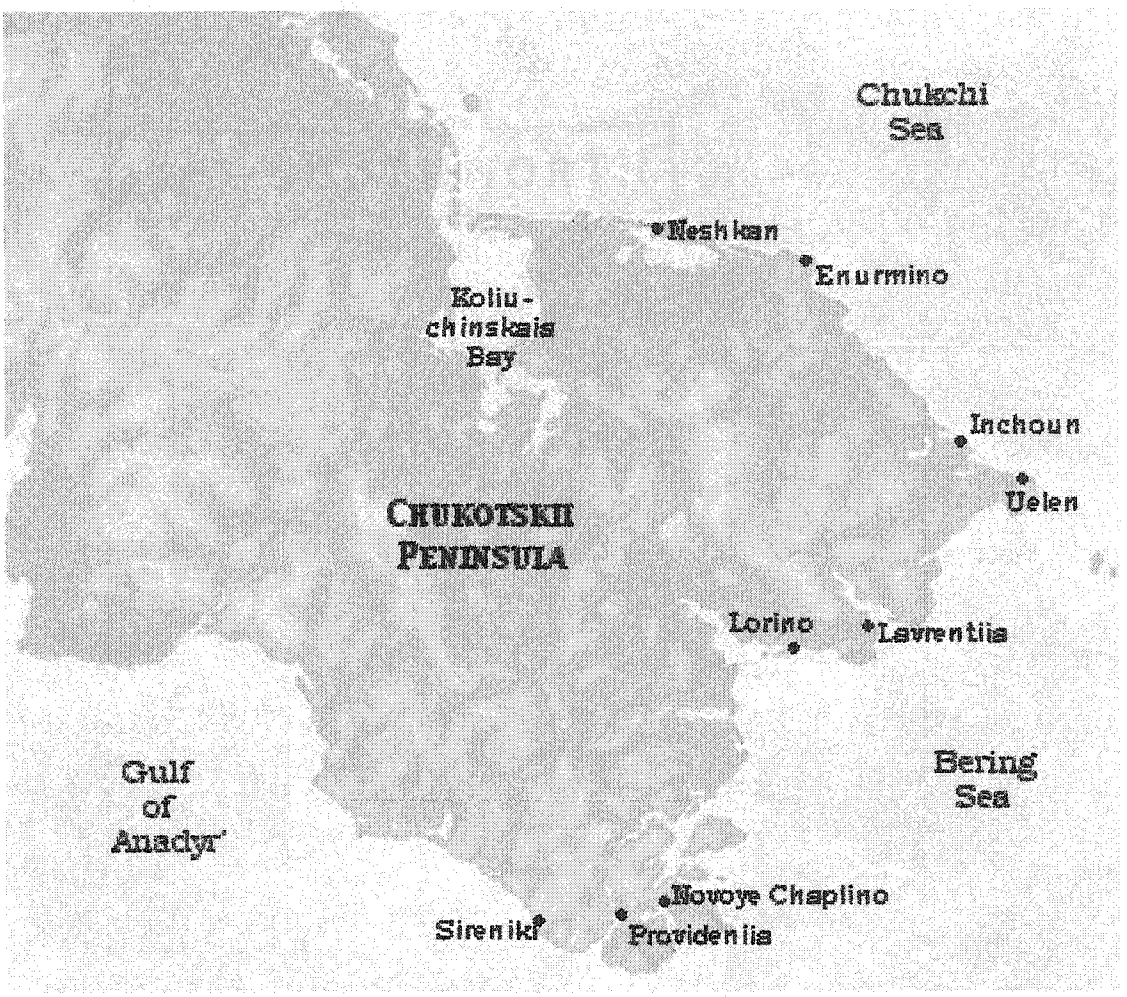

Figure 6. Chukotskii Peninsula, Chukotka Autonomous Okrug, Russia. (adapted from www.multimap.com map)

Politically, the Seward Peninsula is a part of the State of Alaska and subsumed under regional native governments, though the northeastern part lies within the Northwest Arctic Borough. It is bordered on the north by the Arctic Ocean (Kotzebue Sound and Chukchi Sea), on the west by the Bering Strait, which separates it from the Chukchi Peninsula, on the south by the Pacific Ocean (Bering Sea), and

on the west by the lower Buckland and Koyuk Rivers. Similar to Chukotka's proximity to Moscow, the Seward Peninsula and Alaska are the farthest regions of the United States from Washington, D.C. The area of the Seward Peninsula is 53,400 square kilometers.

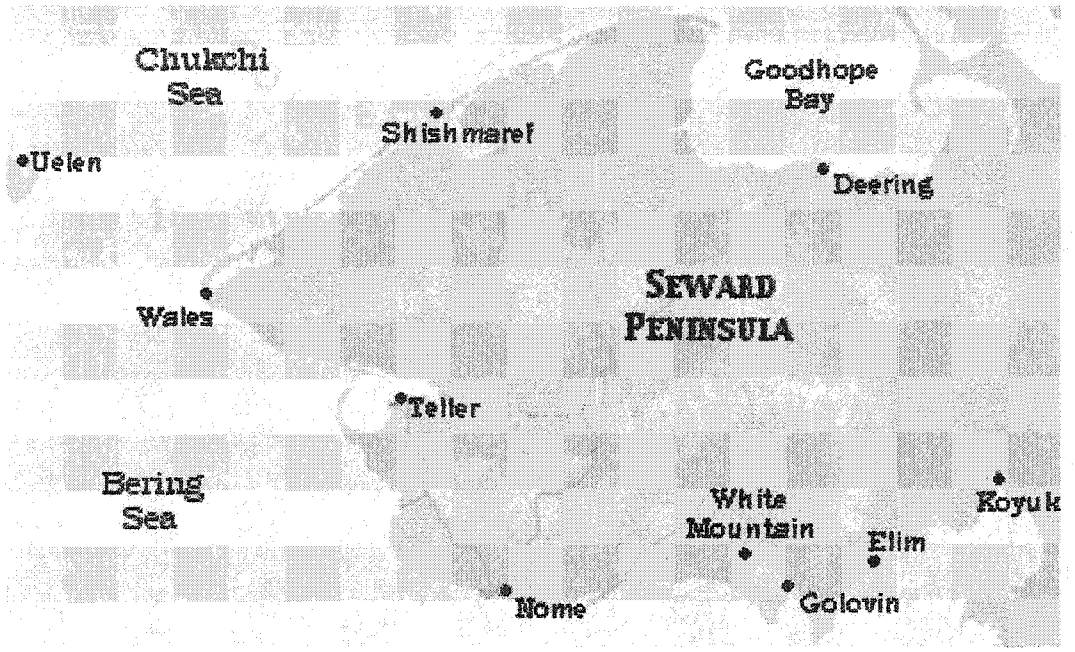

Figure 7. Seward Peninsula, Alaska, United States.
(adapted from www.multimap.com map)

The landscape of the Bering Strait Peninsulas is primarily a mixture of plateaus and mountains, containing extensive uplands of broad, convex hills and flat divides 150-600 meters high, cut by sharp V-shaped valleys. Isolated groups of rugged glaciated mountains with peaks from 800-1,400 meters in elevation reach above coastal lowland and interior basins. The rivers of the region flow primarily towards the Arctic Ocean and the Pacific Ocean basins. The largest river of the

region is the Anadyr' River which flows into the Bering Sea. As well, there are many relatively small lakes in the region, and permafrost and tundra cover most of the Chukchi and Seward Peninsulas.

During summer months, between May and September, the tundra is covered with flowers, shrubs and wild berries. Animals include reindeer (wild and domestic), polar bears, Arctic geese, Arctic foxes, squirrels, wolves, brown bears, white hares, reindeer, seals, and walruses occur on both sides of the Bering Strait (Schweitzer and Gray 2000: 19). Reindeer were introduced on the Seward Peninsula at the turn of the twentieth century to provide an additional food source, and musk oxen were introduced in 1970.

Comparatively, the Bering Strait peninsulas have a severe climate. The geographical location of the Bering Strait peninsulas between the Arctic and Pacific Oceans has resulted in extreme temperatures and complex atmospheric weather patterns. Cyclones and anticyclones are characteristic of the area's weather, which may change several times a day, from strong, cold north winds to southern winds that bring rain, sleet, snow, and blizzards. The average annual temperature is below zero degrees centigrade throughout the region almost every year. Strong winds, up to 30 meters per second, form big snowdrifts that cover the Bering Strait peninsulas from September until May.

Much of the Chukotka Peninsula, and a large portion of Alaska's Seward Peninsula is covered by the Beringia International Park, which stretches across the Bering Strait to include a large portion of Alaska's Seward Peninsula. The presence of this international park is

problematic, due to the restrictions imposed by the governments of the region on hunting, fishing, and herding in the park's boundaries. On both sides of the Bering Strait, dissatisfaction was expressed concerning the limitations imposed by the park's presence, though there was an implicit understanding of the environmental ideal embodied by the park. It was reported on the Chukotkan side, though, that on occasion the park's lands were used by political and economic elites for personal hunting endeavors.

The Chukchi of the Chukotka Peninsula

The Chukchi of Chukotskii *Raion* of the Russian Federation are one of many reindeer herding societies within the Russian Federation who experienced the Soviet period, collapse, and post-Soviet period and are *very* marginalized politically and economically today. The situation of the Chukchi has been well documented, especially in post-Soviet Russia (Gray 1998, 2000, 2002; Kerttula 2000; Kiselev and Kiseleva 1987; Krupnik 2000; Schweitzer and Gray 2000; Vitebsky 1990). The Chukchi of Chukotka inhabit the most distant locale in the Russian Federation from the traditional centers of power in Moscow and Saint Petersburg. According to the 1989 census, the Chukchi numbered approximately 15,000 in the entire Soviet Union, which declined to approximately 11,500 in 1997, and today stands at about 12,500.

In easternmost Eurasia, reindeer herding among the Chukchi (and Koriak) may have been an autochthonous development, though many

believe the skills associated with reindeer breeding reached the Chukchi via the ancient Tungus (Krupnik 1993: 161). The region being comprised primarily of tundra, the Chukchi practiced a form of reindeer herding known today as the "tundra" type, characterized by much larger herds than those of the "taiga" type, in which individual reindeer are used primarily for food and raw materials (Krupnik 1993: 88). Chukchi herders were traditionally nomadic, important in maintaining trade contacts with coastal Chukchi and Siberian Yup'ik. Generally, reindeer products, especially skins, would be traded for sea mammal products such as seal oil.

The ancestors of the Chukchi (and Koriak) were likely hunters of caribou (wild reindeer) in the Chukotkan interior by at least 3,000 years ago. Archaeological evidence suggests that the Chukchi shared much of their land with Eskimos, and it is possible that the coast of Chukotka from at least east of 170 degrees longitude was occupied by Eskimos. Eskimos (or "proto-Eskimos/Eskaleuts) are believed to have been present prior to the appearance of the Chukchi (and Koryaks). A continuing trend is that Asiatic Eskimos are gradually assimilated into Chukchi culture, and that this admixture accounts for the coastal maritime Chukchi (Arutinov 1988: 39-40).

The Chukchi are closely related ethnically and linguistically to the Koryaks, and ethnically to the Itel'men. Historically, the Chukchi were the predominant people of their region and were known to have raided neighboring groups. The Chukchi most effectively resisted Russian domination and continued to function as a semi-independent nation

well into the 19th century. Until well into the twentieth century, the Chukchi had only a slight sense of common ethnic identity, and regionally based tribal identities were much stronger; a more generic Chukchi identity is now developing.

Among the pre-Soviet reindeer herding Chukchi, the nomadic camp was the most important sociopolitical unit, and large political aggregations seem to have been rarely formed. These herding camps typically consisted of four or five extended families, and their counterpart, the whaling crew and extended family, was the equivalent social group among the coastal Chukchi. Notably, unlike many other Siberian peoples, the Chukchi did not follow a strict clan organization (Schweitzer and Gray 2000: 21).

Among the Chukchi, large-scale reindeer herding and its associated pastoral subsistence system emerged in the mid-eighteenth century. As domestic populations increased, wild reindeer decreased markedly, and had almost disappeared by the end of the nineteenth century (Krupnik. 164). The emergence of this new way of life among the Chukchi seems to have its origin in a Chukchi-Koryak feud, in which the Chukchi stole their deer from the neighboring Koriak and Yukhagir (Bogoras 1931: 108-112). This rise of reindeer pastoralism was, believes Krupnik (1993: 165), a result of a "conducive social climate" in Russia "rather than the main agent provocateur" of Russian expansion.

Historically, the Chukchi were in contact with American whalers in addition to Russian military leaders, *promyshlennikd* and explorers, and earlier Chukchi-Yup'ik-Iñupiaq trade and strife were established.

Promyshlenniki, "manufacturers, industrialists," were actually explorer-traders who accompanied or followed officially sanctioned Russian exploration and expansion into Siberia and Alaska. Ethnic Russians first encountered the Chukchi in 1642, when the Cossack Ivan Yerastov met them on the Alazeya river. In the 1640s, the Russians built two forts on the Kamchatka, and commercial traders, fur trappers, and hunters used these forts as a base and established permanent contact with the Chukchi. This contact brought many problems to the Chukchi, especially in the form of diseases such as influenza, mumps, and smallpox. These infections spread among the population, and alcoholism became a problem as Russian traders often paid with vodka.

In Russia, the Chukchi were renowned for repulsing Russian forays and demands during the tsarist period. Though the Russians managed to establish a presence through the Anui Trade Fair in 1788 following the Chukchi-Cossack wars, little real control was established. The 1857 Legal Code of the Russian Empire classified the Chukchi as "aliens not fully conquered," though in fact the Chukchi remained effectively fully independent until well after the collapse of the Russian Empire (Slezkine 1994: 105).

After the Revolution of 1917, the Soviet government issued the "Declaration of the Rights of the Peoples of Russia," including a set of rights of self-determination, that largely remained symbolic, seeing little real application. This occurred simultaneously with government policies of "modernisation." In 1924, a Committee of Assistance of Peoples of the North was established which proposed creating large reservations where

indigenous populations could continue their traditional life-styles. Instead, the Soviet government decided to integrate these peoples into the larger social, political, and economic body of the country, and around 1930, several "national districts" were established, which were in effect only administrative units named after one or two of these minorities; one of these districts was the Chukchi *oblast'*.

Forced collectivization of Chukchi reindeer herds started in 1929 with the dual purpose of implementing communist economic ideology and the "Russification" of the Chukchi with attempts to eliminate their traditional nomadism. The construction of "cultural bases" in Chukchi territory, with schools, hospitals, day-care centers and other social services, served the same goal. The government also attacked Chukchi religion, and both Native and Russian Orthodox services were forbidden.

During and after World War II, the Chukchi were affected by the relocation of much of Soviet industry to areas east of the Ural Mountains. As well, large-scale industrial development projects, especially for the extraction of fossil fuels and gold, resulted in re-/dis-locations. These activities led to a significant influx of ethnic Russians, and with their arrival, new assimilation pressures. The Chukchi and other indigenous groups found their accessible land decreasing rapidly, and more and more of the Chukchi reindeer herders (*Chavchuven*) gave up reindeer herding and settled in the coastal villages. Many dislocated Chukchi took jobs at construction sites, oil and natural gas wells, and mass-production factories. They became gradually more integrated into a broader cultural and economic, albeit Soviet, world, where they

interacted with Russians, Yakuts, Evens, Yukagirs, and others from far to the west and south.

In the 1990s, the Chukchi experienced economic and social collapse resulting from the chaotic conditions following the end of the Soviet Union and attempts at privatization. In the new situation created by *glasnost* ("openness"), and by the fall of the Soviet Union in 1991, the Chukchi joined 25 other native Siberian peoples in establishing the Association of Peoples of the North. During this same period, the legislature of the Chukchi Autonomous region in Magadan oblast' seceded from Magadan to become an autonomous polity of the Russian Federation. Amid these changes, reindeer herds experienced plummeting populations due to political-economic and ecological factors. This, coupled with a lack of facilitating infrastructure, has led the institution of reindeer herding among the Chukchi towards potential oblivion. Reindeer herding among the Chukchi is an integral part of Chukchi identity and economy; its complete collapse would be devastating to Chukchi culture.

The Iñupiat of the Seward Peninsula

The Iñupiaq reindeer herders of the Seward Peninsula of Alaska stand stark contrast to the Chukchi. The unique situation of the Iñupiat reindeer herders stems from the introduction of reindeer and reindeer herding into their population by American governmental directive. A relatively new institution among the Iñupiat, Iñupiaq

reindeer herding has been heavily studied in the recent past (Bodenhorn 2000; Dau 2000; Finstad 2001; Greenberg 1984; Shane, et. al. 1998; Simon and Schweitzer 1996; Simon 1998).

Among the Iñupiat of the Seward Peninsula, reindeer herding was introduced more recently than in Chukotka. Simon (1998) classifies reindeer herding on the Seward Peninsula into the following: the Early Private Reindeer Herding period, the Collective Reindeer Herding period, and the Reprivatized Reindeer Herding period. However, the first introduction of reindeer into Alaska occurred in 1891, when the United States government encouraged Alaska Natives to own and herd reindeer as a source of economic stability (Shain et al. 1998: 28). As the caribou populations declined on the Seward Peninsula, the gap was filled with domesticated reindeer.

It should be noted that in the Iñupiaq area, initially the introduction of reindeer from Chukotka failed, but through the persistence of Sheldon Jackson, an American education agent in Alaska, more than seven hundred deer were transported to Alaska by 1900 (Vorren 1994: 14). First Jackson tried to use Chukchi herders to teach the Iñupiat how to herd reindeer, but this, too, failed due to social tension between the Chukchi and Iñupiat. Consequentially, Jackson recruited herders (mostly Saami, but some Norwegians) from Finnmark, Norway (Vorren 1994: 17), and by the beginning of the twentieth century, Saami herders were teaching and integrating well among the Iñupiat.

The Early Private period of Alaska Reindeer herding stretched from 1904 until the mid-1920's and was defined as a time of open pastures

with private ownership of herds. The bulk of the Iñupiaq population, however, remained hunters and fishers during this period, and their societies as a whole did not become pastorals. Simon states (1998: 300) that in this period, the Iñupiat were long accustomed to the products of reindeer herding from trade, and this trade provided the framework for incorporating reindeer herding into Bering Strait hunter-gatherer cultural logic, rather than an emergent shift to a pastoral cultural logic.

By 1932, during the Collective Herding Period, there were an estimated 600,000 reindeer in Alaska (Shain, et al. 1998: 28). This "collective" period was less like the collective farms of Soviet Russia than like the stock-based corporations of western capitalism. This transition from small, private ownership of herds to large-scale ownership was difficult for the Iñupiat. Each individual was invested in the herd through the holding of shares, but this did not entitle them to take what they needed from the herd. An administrative process which relied on mathematical determination of dividends based on the proportion of shares owned by the shareholder and coupled with the herd's growth-rate determined access to reindeer resources (Simon 1998: 304). A similar concept has recently been unsuccessfully attempted in Chukotka.

By 1948 a reprivatization of reindeer herds was initiated after government administrators realized the unsuccessful results of collective-corporate herding. One result, however, of reprivatization was a limitation in the number of families who had access to reindeer herds (Simon 1998: 306). An emphasis on commercial production developed during the collective period, was maintained, and technological

innovation was promoted. This mechanization among the Iñupiat resulted in herders becoming increasingly dependent on acquiring cash to purchase and maintain mechanical equipment (Simon 1998: 307).

Currently, the herders of the Seward Peninsula are integrated into the United States politically and economically. Legislation and variable ecological and climatological conditions have limited the spread and continuation of reindeer herding, however, and its relevance to Iñupiat culture at large is less overarching than among the Chukchi or Saami. With sufficient existing infrastructure, the contemporary conditions of reindeer herding on the Seward Peninsula are much more favorable than those of Chukotka. Additionally, in spite of ecological and market fluctuations, and the allowances or limitations of relevant legislation, reindeer herding on the Seward Peninsula is relatively stable compared to Chukotka. The historical, economic, ecological, and cultural scales of reindeer herding on the Seward Peninsula, however, are limited, largely due to its much shorter availability as an economic strategy.

The Iñupiat are an Inuit, or Eskimo, people who inhabit the coasts and nearby lands of northern and northwestern Alaska. They share commonalties with Inuit peoples in language and culture across a wide spectrum of variations stretching from Greenland to Alaska. The Yup'it, more distant relatives of the Iñupiat, live generally to the south and west of the Iñupiat, along Alaska's western and southern coast, and across the Bering Strait to Chukotka, and have a separate language. While most reindeer herders in Alaska are Iñupiat, most Iñupiat are traditionally sea mammal and caribou hunters and fishers within a

subsistence hunting economy. In the present, participation in the wage-oriented economy of Alaska and the United States is common.

Traditionally, Iñupiaq social groups lived either as small, semi-nomadic bands along river-systems or in permanent coastal communities. In coastal communities, whaling crews formed important social units, and whaling captains and their wives had status and authority (Bodenhorn 2000: 134). Clusters of semi-subterranean houses made of driftwood and whalebone formed the basis of the permanent coastal communities, which could reach populations of several hundred (Fitzhugh 1988: 44). Today, Iñupiaq villages tend to be coastal and are comprised of houses more similar to the standard multi-room terrestrial forms found throughout the United States.

The political and economic situation of the Iñupiat today is largely determined by the governmental bodies of Alaska. At the most local level exist village councils, which largely conduct local affairs. However, some Iñupiaq communities lie within boroughs (counties), all of which fall under the jurisdiction of the Alaska state government, and are subject to federal laws. Perhaps most importantly, Iñupiaq (and other Native) communities are constituent parts of "native corporations," regional economic institutions created under the Alaska Land Claims Settlement Act of 1971 (ANCSA). With the 1968 discovery of oil at Prudhoe Bay, the process of settling native land claims began. Eventually, the final form of ANCSA awarded 44 million acres of land and $962.3 million to Alaska native corporations (Bodenhorn 2000: 141).

Among Iñupiaq reindeer herders, most are members of the Bering Strait Native Corporation (BSNC), established in 1972, and the associated Kawerak, Incorporated (1973), which hosts the Reindeer Herders Association (RHA). The Reindeer Herders Association provides assistance to its members who are reindeer herd owners and managers. The program offers administrative and logistical advocacy and field support toward the development of a self-sustaining reindeer industry. Reindeer herders of the northeast portion of the Seward Peninsula are members of the Northwest Arctic Native Association (NANA), founded in 1972, and which is coterminous with the Northwest Arctic Borough, the region's main governing body.

While ANCSA was intended to extinguish all further land claims, a problem persists due to the original Native Allotment Act of 1906, which granted eligible Natives throughout the United States entitlement to surface rights to up to 160 acres of unclaimed land. Eligibility is based on the provision that the applicant has established potentially exclusive use and occupancy of the land. Within the traditions of Iñupiaq culture, these qualifications remain problematic:

> In our society--you use it--it's yours. There was no need for a title--it's everybody's. [I] have seen change from the both sides....We were caught up in a white society in black and white....We did not learn how to keep title--or we would have all of the title up on the North Slope, completely.--Raymond Nealok, Sr., Barrow. (Bodenhorn 2000: 140)

Obviously, then, while ANCSA did resolve some problems concerning access to and ownership of lands in Alaska, it did not bring the issue to conclusion, and debates persist over amending or adjusting access and ownership.

SUMMARY

For reindeer herders, the process of a shift from subsistence to commercial production continues today throughout the circumpolar North, ever-increasing the economic dependence of herders to the outside market. This characterizes the historical relationship and basis of reindeer herders with the 'outside world'--a relationship based on the unequal exchange of reindeer-products for, usually, agricultural or manufactured goods. The post-World War Two period has seen a tremendous solidification of this relationship as reindeer herders become increasingly dependent on manufactured goods, maintenance parts for machinery (primarily transportation), and fossil-fuels, all within the parameters of a cash-based, capitalist-oriented, increasingly global economic system.

CHAPTER 4

REINDEER HERDING AS A SOCIAL PROCESS

INTRODUCTION

Beginning with a review of historic social organization in reindeer herding communities, this chapter examines institutions that are a part of indigenous reindeer herding practices. This is presented within a historical context that leads to the discussion of contemporary reindeer herding institutions and their derivation from previous sources. How differences in social organization account for differing degrees of decline is investigated as well as the role of social organization in decline in the global capitalist system. Therefore, reindeer and their herders are viewed within the context of the local community and the relations of the herders of the local community to the wider world. This chapter also investigates the role certain social institutions have in the emergence of the current state of reindeer herding. Finally, ecological issues and how these issues are resolved at the local level will be examined.

Among contemporary reindeer herders, social structures are a mixture of indigenous institutions and those of the politically dominant culture. Therefore, kinship-based institutions occur alongside state-based institutions on different political levels. Generally, local affairs are managed locally, with varying degrees of state oversight. Affairs with wider implications are usually managed by extensions of the national-

state political structure. These structures are dependent on the forms of national government of the states in which reindeer herders dwell. The various forms of national government, and their historical antecedents, have heavily influenced indigenous social structures, and in some cases have fully replaced them.

Indigenous and state political structures both directly affect the organization of reindeer herds themselves in that they are a combination of customary law and state law (see Chapter 6: Reindeer Herder Relations with the State and Industry for discussions of law and legal issues). Various legal protections for reindeer herders and the practice of reindeer herding have emerged in each of the case study countries. Nevertheless, all share the same situation of ultimate state control or ownership of grazing lands. Historical and contemporary social structures will be discussed below.

HISTORIC SOCIAL ORGANIZATION AMONG REINDEER HERDERS

Pastoral societies tend to organize along kinship lines, with kin-based polities acting as the maximum unit of identification, especially before their heavy socioeconomic integration into nation-states during the twentieth century. This indicates an essentially kin-based political structure, with kinship reckoning most commonly being patrilineal (Khazanov 1983: 126-127). In addition to kin-based polities, households often operate quite autonomously from other political units, with their political strength determined by the strength of the kin-group.

Furthermore, the status of women in pastoral societies is generally higher than in sedentary societies (Galaty 1990: 23-24).

The importance of the household unit is demonstrated by its universal presence, along with the presence of more extended communities, among pastoralists. The notion of the household as the basic social unit among reindeer herders can be fruitfully compared with the concept of *Umwelt* developed by the German semiotician Jakob von Uexküll (1908). The *Umwelt* is the semiotic world, or whole, of an organism (Kull 1998: 303), or social unit such as a household. It is the uniting of all constituent processes into a whole. Likewise, the household can be seen as a cluster of the individuals and institutions that together create a household. This 'defined' unit is malleable and not a concrete, material niche, since any 'boundaries' are permeable.

With the household as the basic unit of economic production, and with the highly mobile nature of pastoral production, household sizes are necessarily limited, with larger populations corresponding to increased sedentarization. This usually parallels national trends or, in the Soviet case, government directives. However, the degree of reindeer herders' incorporation into national or global political or economic structures varies considerably as a product of differing historical backgrounds and geographic proximities to the dominant cultural-political core.

Among reindeer herders, indigenous structures of power are generally based on access to the primary resources of reindeer and pasture. The organization of this access forms the basis of territoriality

and the allocation of labor and the resources themselves. Political hegemony among indigenous local political structures was impractical because resources needed for other aspects of survival. Local political institutions and concepts of territoriality of the reindeer herders of the case studies will be discussed below, with a focus on the Saami, including those of Finnmark and the Kola Peninsula, because of the greater volume of historical material available. This is not to the exclusion of the Chukchi, however, and it should be noted that the Iñupiat of this period were still primarily sea mammal and caribou hunters. A brief note concerning the cultural ties between reindeer herding and sea mammal hunting is relevant here,

Starkly contrasting to the reindeer herding Chukchi and Saami, the Iñupiat were introduced to reindeer herding only in the late nineteenth century as a viable alternative to dependence on the caribou hunt. The Iñupiat of the Seward Peninsula, as with most Iñupiat communities, maintained social groups ranging from small, semi-nomadic bands to large, permanent settlements (Bodenhorn 2000: 134). Since reindeer herding was not practiced by the Iñupiat until the late nineteenth century and was never as widespread as in Eurasia, reindeer herding did not significantly influence indigenous social structure. Conversely, reindeer herding was adapted into existing social structure, largely drawn from Iñupiaq whaling practices.

In most Iñupiaq communities, prestige was based on connections to particular whaling captains, which was the most important of procurement activities. Whaling captains would often meet to decide on

important issues for the entire community. While leadership positions were not permanent, whaling captains and their wives had status and authority that enabled their families to have more influence in leadership and economic affairs (Bodenhorn 2000: 135). Among the Iñupiat, reindeer would come to be privately owned by individual herders, but reindeer herding would come to be incorporated into indigenous concepts of property, wealth, and prestige (Simon 1998: 299-301).

The Saami, by comparison, possess a long tradition of reindeer herding, which fundamentally influenced concepts of territoriality and patterns of settlement. Saami territorial concepts are not entirely synonymous with those of the nation-state, and while territory is delineated by geographical markers, a *siida* does not have exclusive rights to all resources within it. Historically, where multiple *siida* united, the combined territorial areas were opened to all involved in the 'union' with resource-exploitation rights allocated 'according to requirement.' Also, there appear to have been territorial divisions to prevent conflicts over rights of exploitation, particularly in hunting and fishing. This prevention of conflict was conceptualized within a framework of "not coming into contact with each other" (Odner 1992: 88).

This suggests that territoriality among the Saami of the historical period was more a concept of a 'territory of various resources' (i.e., defined in terms of usufruct) than a 'territory of land with accompanying resources.' This further suggests that the Saami consciousness of territoriality was one of having specific resources in a generalized area, as opposed to more familiar concepts of territoriality based solely on

geographic space with absolute rights to all resources within. The Saami conception of territoriality, therefore, was traditionally socially defined by kinship relations and local alliances, while vague geographical boundaries with a focus on resource type and its availability were recognized.

In the sixteenth century there was a gradual shift from Saami reindeer hunting to reindeer herding, which accelerated and became widespread. The primary sixteenth century settlement type included large camps with associated peripheral hunting camps. These large camps likely consisted of 100-150 individuals who were involved with activities such as fuel-collecting, fishing, hunting and the emergence of animal husbandry (cattle and reindeer). However, by this time hunting was a declining industry as a result of overexploitation of fur-bearing species. Saami populations continued to exploit resources through patterns of transhumance (between the coast and inland), migratory bands and, almost exclusively along the coasts, sedentarism.

As the fur-based hunting economy declined, however, concepts of territory shifted. With the spread of reindeer pastoralism, formerly minor resources such as land-based pasturage were elevated in importance. The peripheral position of the Saami as suppliers of raw materials (i.e., furs, meat, and fish) to the larger European market core must be taken into consideration in relation to settlement patterns. As well, Saami perceptions of ownership and usage rights of resources within the territory of a band (*siida, sita*) is important to the understanding of the strategies employed for extracting resources.

During the seventeenth century, by contrast, there was a considerable shift in settlement patterns and subsistence activities, accompanied by a moderate involvement in the market economy of Europe. The primary settlement pattern shifted from large camps with relatively high populations to smaller, seasonal camps with several seasonal dwellings inland, and small sedentary camps in coastal areas. The camps of the pastoral Saami became increasingly dependent on the mobility required to herd reindeer, and therefore became smaller (Beach 2000: 227). In addition to the increase in the use of domesticated reindeer, use of domesticated cattle among the sedentary coast-dwellers, some of whom were shifting increasingly from fishing to agriculture, also grew. As this occurred, many Saami turned from traditional Saami house-forms to more permanent Nordic-Finnic-Russian types.

This concept of territoriality began to shift, however. Smaller communities gradually replaced large camps of multiple households. This occurred for two primary reasons: a decline in violent raids and the gradual redefinition, and therefore redistribution, of food-bearing resources. Earlier, the larger communities were more protected from the intermittent raids of non-Saami into the Saami areas. These raids diminished during the seventeenth century as Saami communities were gradually incorporated economically, and then politically, into encompassing nation-states. Also, the redistribution of food resources was much easier after a communal hunt if more families lived in close proximity. This shift occurred alongside continually rising taxation and market demands.

In the increasingly ranked society of the hunting Saami, the more difficult and unreliable the prey, the more prestige was gained by the hunter. While fishing provided much more potential food, the hunting of reindeer was more prestigious, and so the decrease of wild herds, coupled with continuing non-Saami demand for animal-based resources, symbolically and economically reinforced the shift towards domestication. Domestication provided a stable supply of the reindeer products in high demanded. The introduction of firearms also fuelled the decline of non-domesticated species and simultaneously provided a more effective military defense of smaller groups, whether locally or by the encroaching nation-states.

The role of firearms in this shift from large camps to smaller camps was important for other reasons. This was when the present-day division between coastal and inland Saami became definable in its modern (less inclusive) form, though economic differentiation had long been present. While this differentiation of economic activity was growing more exclusive, the exploitation of both coastal and inland resources by a single *siida* continued at least through the seventeenth century:

> From these [hunter-fishers] throughout the seventeenth century developed a reindeer-nomad people who migrated between the coast and inland [regions] and a more sedentary sea Saami population with cattle and fishing [forming] the base of the economy. (Mikkelson 1993: 49)

Movements from the highlands to the coasts were supported by the declining productivity of the hunt, which also promoted the development

of domestication and the pastoral nomadic lifeway. As less meat was available for redistribution within large communities, these communities fragmented, promoting small communities better able to support themselves on dwindling resources. Likewise, it is this decline in productivity that encouraged a redefinition of resources, including a shift to reindeer pastoralism and a rising awareness of pasturage as the primary resource for reindeer management. Also, by the eighteenth century, marine resources seem to have no longer been considered part of the *siida* territory (Odner 1992: 91). However, sea-based resources stranded on land, such as drift whales, remained territorially defined and vigorously defended. In general, right of first usage of all resources within the *siida's* concept of territoriality was hypothetically assured.

Since the early twentieth century, however, particularly on the Kola Peninsula after the 1917 Russian Revolution and subsequent collectivization, the Saami have shifted back towards large, concentrated communities. In other areas of Sapmi the concentration of herding Saami into villages, largely under national pressures, reflects the shift from intensive herding to extensive herding, with little supervision over a wide, relatively free-range area. This consideration of herd management requires a comparison of management techniques as an essential element of indigenous social organization.

Many distinct forms of herd management, each with its own sub-variations based on ecological and sociocultural peculiarities, are seen to be utilized by pastoral nomads in general (Khazanov 1983: 18-19). These variations represent a continuum of sedentarism and dependence on

herded species as the basis of economic activity. Herd management and related human institutions vary widely; while among some, entire families move with herds, among others, only herders follow the herds. Among some, reindeer are kept near the household to be used primarily as transport animals (Nganasan, Evens, Evenks). To others, reindeer herding has traditionally included not only subsistence concerns but commercial concerns as well (Komi, Nenets, Yakuts, Chukchi, Koryaks, Iñupiat). Though in recent times these herding peoples have suffered economic and social hardships, the long-established tradition of the trade of reindeer products could encourage future continuance of reindeer husbandry (Baskin 2000: 27).

The advantage of reindeer herding and husbandry over reindeer (or other animal) hunting is the guarantee of labor and survival with the option of harvest at any time. As such, reindeer herding, in its many forms, is an agricultural activity. Reindeer herding likely emerged from reindeer hunting, and hunting and herding of reindeer have long occurred together, though to different degrees based on local needs or regional demands. Reindeer herders (and hunters) live within a continuum of nomadism to sedentarism, which supported a diverse array of cultural forms in the circumpolar North. This diversity can be seen as a collection of successful cultural adjustments to the high insecurity and general resource instability of the circumpolar environment (Krupnik 2000: 50).

The dominant economic organizational form utilized by reindeer herders is semi-nomadic pastoralism, including extensive pastoralism

(i.e., large herds on a free range with minimal direct human intervention, cf. below), periodic changing of pastures, and the practice of supplemental hunting and gathering, horticulture, or agriculture. These secondary economic activities may be practiced either by the herders themselves or by specialists, often women, within the pastoral society (Khazanov 1983: 19). Among contemporary reindeer herders, this co-practicing of economic activities is common throughout the circumpolar North.

The Saami, especially, have long mixed fishing and agricultural activities with reindeer herding, and in the contemporary situation, far more Saami practice vocations other than reindeer herding (Beach 2000: 233). The Chukchi, overall, also practice this form of management, though their culture is divided into a reindeer herding inland population and a coastal marine mammal-hunting population. Economically, these two populations depended on each other for the exchange of sea mammal products for reindeer products (Schweitzer and Gray 2000: 20).

Very similar and also widespread is the semi-sedentary form of pastoral nomadism. Under this condition, hunting and gathering, horticulture, or agriculture is practiced to an extent comparable with pastoral production. This form can lead to either seasonal migrations or a social division between nomadic pastoralists and sedentary agriculturists (Khazanov 1983: 21-22). This form is prevalent among the Iñupiat of Alaska's Seward Peninsula, where reindeer herders are also heavily involved in the hunting of seals, walruses, ducks in spring and summer, and caribou (wild reindeer), and fishing, and berry-picking

(Simon 1998: 265, 270). This reflects the much longer traditions of hunting and gathering among the Iñupiat. In the Seward Peninsula region, reindeer herding provides what is essentially an economic addition to indigenous economic activities of the Iñupiat: hunting, fishing, and gathering. In fact, On the Seward Peninsula today, only fifteen families are designated as 'reindeer herders,' and most of these no longer possess herds.

A focus on the various herd management forms of reindeer pastoralism provides for a more detailed understanding of the differences and similarities between the herding systems of reindeer pastoralists and accompanying herd management techniques. Among reindeer herders, an evolutionary historical series of forms has been defined (Ingold 1980), including decoy use in hunting, full pastoralism, and ranching. The most obvious relation between these systems is, among pastoralists and ranchers, the ownership of animals. While the practice of ownership of game is rare among hunters, the hunting system shares a common predatory aspect with ranching. This less obvious relation is evident in the way ranched reindeer are herded *extensively*, or with little supervision over a wide, relatively free-range area. When resources are needed, these large herds are pursued, collected, confined, and selected reindeer are dehorned or slaughtered and butchered.

Pastoralism encourages the tendency for herd maximization, enabling an accumulation without the need, or often possibility, for exchange. The presence of a market offers the pastoralist a direct source of surplus exchange, which can lead to a condition of extreme herd

maximization (Paine 1971: 166). This increasingly extensive form of pastoralism leads to the condition of 'ranching,' which itself includes a divided access to live property and a relation between humans and reindeer that is essentially predatory, as occurs in a condition of reindeer hunting. Furthermore, this transition entails a division of control of territory (i.e., private ownership of land) (Ingold 1980: 235).

In Fennoscandia today, a significant shift from indigenous forms of herding to more ranch-like forms of herding is occurring. The indigenous forms include *intensive* herding, or strict control of herds, and *intensive* husbandry, or diversity in the utilization of reindeer products. The shift to *extensive* herding and *extensive* husbandry entails long periods of little or no actual herding and a primary allocation of herd capital for market sales (Paine 1972: 81-82). The mixture of these forms has been and continues to be the most common practice although a tendency towards extensive forms exists today.

The Saami generally employ extensive herding in winter, strict control of females during the calving season, release of the reindeer in the summer, and a gathering back into large herds during rutting. The Soviet Russians tried unsuccessfully to get the Saami to adopt Komi herding techniques, which favor close herding year-round and provide better results (i.e., more, healthier deer). Occasionally, reindeer are maintained in fenced enclosures on the Kola Peninsula, in Sakha (Yakutia), and Khabarovskii *Krai*, but this is rare due to the high costs of maintaining these enclosures (Baskin 2000: 24). The Chukchi, in

contrast to the Saami, generally keep large herds that are maintained year-round because herders adapted to a shift-work method.

This leads to variations on the extensive-intensive dichotomy of herding. In the close-herding management type employed in the tundra and forest-tundra zones of *Bol'shezemel'skaia* Tundra, Yamal, Taimyr, Yakutia, Chukotka, and Kamchatka, aggregations of reindeer are large. Alternatively, a free-camp system in which reindeer are kept in the vicinity of camps or settlements is used in Tofolariia, Tuva, Buryatiia, and Sakhalin. In contrast to these, the loose herding system, in which herders only periodically gather scattered animals and move them to fresh pastures, is commonly used on the Kola Peninsula, in the Khanty-Mansiiskiy Okrug, Yakutia, and Evenkia (Baskin 2000: 24). A similar situation exists among the Iñupiaq reindeer herders where extensive herding is accompanied by infrequent related activities including the harvesting of antler velvet and some meat in summer and meat harvesting in the winter (Simon 1998: 264, 271).

One of the peculiarities of reindeer pastoralism includes the use of only semi-domesticated stock, a condition reinforced by extensive herding techniques. Also, tundra and forest-based pastures are quite fragile and highly variable in quality. This causes a variation in the quality of the reindeer as a product, and this variation in quality becomes more pronounced under conditions of extensive herding and husbandry. Additionally, the worldwide shift to ranching as a form of livestock raising is widespread, and provides a degree of qualitative

stability for reindeer products similar to products of fully domesticated livestock.

Socially, a rancher of any kind is essentially a capitalist with concerns for maximizing returns on financial investments. However, among most reindeer herders utilizing ranching techniques, ranching is practiced as a livelihood first, and as a business venture second. This does not necessarily apply to the ranching of other animals. As a financial venture, such practices as selective breeding, herd maximization, and hunting of competitive predators occur. Ranching involves private access to both territory (land) and herds (capital). Essentially, then, ranching can be described as 'capitalist stock-raising' in which the subsistence economy is either transformed or replaced (Ingold 1980: 231).

Reindeer herd management, then, takes into account three complementary factors: the herd, the herders, and pasture. These three factors must be relatively commensurate. Failure can lead to a number of problems. A large herd will likely suffer depletion if there are insufficient herders to manage it. Herders who might prefer to remain together may be forced to separate if the pastures are unable to support combined herds. Large and high-quality pastures may be lost by those who have small herds to those who have large herds (Paine 1994: 103). These factors change according to seasonal variation, and so commensuration is an annual and essentially an ecological issue.

Among the Chukchi, extensive herding practices were used during Tsarist times, accompanied by continuous nomadism (Krupnik 1993: 89).

The Chukchi successfully resisted Russian rule through the eighteenth century and even extended their grazing lands south towards the Kamchatka Peninsula and west past the Kolyma River. In 1788, markers bearing the imperial double-eagle were erected on the coast around the territory of the Chukchi to establish claim. However, even the imperial government acknowledged that the Chukchi were "not fully subdued" (Forsyth 1992: 149-150).

This does not imply the presence of a Chukchi state or other politically unifying institution during this period, however, and Chukchi communities were traditionally based on camps of four or five extended families among the herding Chukchi, and on settled villages among the coastal Chukchi, where whaling crews formed the most important social unit. This, along with the extended family, constituted the most fundamental social and political units among the Chukchi, and larger political units of multiple villages or camps seem to have been rare (Schweitzer and Gray 2000: 21).

These forms were maintained through the struggles with the Tsarist forces and into the nineteenth century, when their territory was confirmed by various treaties which also prohibited Russian settlement. During this period populations rose from 6,000 to about 8,000 or 9,000 at a time when surrounding Native populations were suffering depopulation due to diseases mostly brought by the Russians (Forsyth 1992: 150). Additionally, the effects of missionaries were minimal, and the Chukchi, among other reindeer herding peoples, staunchly resisted

Christianity throughout the nineteenth and early twentieth centuries (Krupnik 1993: 86).

The spread of the Soviet Union to Chukotka brought an end to indigenous forms of political organization, or subsumed them under Soviet administrations and later, under *kolkhozy* and *sovkhozy*. However, at the beginning of the Russian Civil War Anadyr', Chukotka's current capital, did not even possess a permanent population, and at the end of winter Russian traders would arrive seeking furs (Forsyth 1992: 261). Most interior-dwelling herding Chukchi were effectively independent until the late 1920's. In contrast, in the town of Lorino to the northeast, locals reported that a communist party was established in 1926. Forsyth (1992: 267; 338) supports this claim when he explains that at this time "cultural bases" were established on St. Lawrence Bay and on the Chaun river during this period and at the inland location of Markovo. Also during this period, in 1930, the Chukchi territory was designated an autonomous district. This began the formal incorporation of Chukotka into the Soviet state.

CONTEMPORARY SOCIAL ORGANIZATION AMONG REINDEER HERDERS

Social organization among reindeer herders at the local level today varies widely between populations. Among the Saami of Finnmark and Iñupiat of the Seward Peninsula, most herders continue to live in small villages. Reindeer are owned by families who hire others in the

community to assist with reindeer herding activities when needed, often paying them with reindeer products. While in both locales local communities are integrated into national and international systems of exchange (i.e., global capitalism), much of the production is intended for subsistence consumption. The village serves as a center for family activities and identity, and its equivalent can be found among the Kola Saami and Chukchi in the form of the *sovkhoz* and *kolkhoz*, though a much higher degree of economic and political autonomy was granted by the Norwegian and American governments than that granted by the Soviets.

In Russia, collectivization destroyed the underlying structure of Chukotkan reindeer herding, and throughout the Soviet period it continued to exist as part of the Soviet economy bolstered by large government subsidies. Under the Soviet system herd and farm management was centrally directed, and management plans were developed and delivered to herders who were obliged to accept them (Gray 2003: 14). Following the dissolution of the Soviet Union, one of three basic forms of reorganization was allowed by the restructuring laws and ideally would result in viable, profit-generating, market-oriented enterprises that would contribute to overall economic growth.

The first of the three forms is the joint-stock company based on the redistribution of farm capital in the form of conditional shares of land (*pai*) and allocations of non-land assets (*dolia*), Ostensibly, each of the former workers on the farm becomes joint owner and works together with the others to maximize profits. A second option for reorganization

includes associations, cooperatives, and communities in which a basic collective structure is maintained. Most conspicuous and possibly successful is the revival of the *obshchina*, a collective organizational form based on the clan or ancestral community. Finally, a third option is reorganization into private farms created from the former state-farm collective with its lands and non-land assets redistributed as *pai* and *dolia* similar to the process utilized in the formation of the joint-stock companies but with fully independent ownership.

Restructuring occurred through a presentation of organizational options to the members of a former state farm (*sovkhoz*) or collective farm (*kolkhoz*) and a vote by the members on which form to adopt. It should be noted that many farms attempted to 'resist' this restructuring by maintaining the general *sovkhoz/kolkhoz* organization while officially adopting one of the reorganizational forms. In all cases, however, these reforms led to massive economic instability and capital loss among Chukotkan reindeer herding farms.

It seems today that those reindeer farms that maintained a collective structure are more successful than other forms in maintaining herd viability and providing for subsistence. Native leaders widely advocate the 'ancestral community' (*rodovaia obshchina*) as the best way for the Native population to maintain its preferred indigenous economic practices (reindeer herding, fishing, hunting and gathering) as well as achieve for itself a degree of local autonomy (Gray 2001: 4). In 2000 a federal law on *obshchiny* was passed by the Russian federal legislature, and subsequently there began an increase in the creation of *obshchiny*.

Through the Soviet period a rapid collectivization of the Chukchi's herds was imposed by the Communist Party. Additionally, forced reallocations accompanied collectivization through which residents of Chukotka were concentrated into a few administrative centers. The herders would then be based in these centers where a permanent home and the family was maintained. This same situation persists in the villages of Chukotka today. Due to the institutional failures of reorganizing state and collective farms into joint-stock enterprises, other reorganizational alternatives are being attempted, most notably the *obshchina*.

The *obshchina* is a post-Soviet mode of property relations, similar to a family-clanholding, and can be classified as an "ancestral community" which regulates local economic activities and local self-government (Gray 2001: 6). Where applied, the *obshchina* has proven more successful than alternatives, but its existence as an organizational mode has not been formalized. The economic structure regulates local economic activities in tandem with the political structure which regulates local political activities, enabling indigenous land ownership, local self-government, and private economic activity. The *obshchina* is rooted in the socioeconomic communities of the pre-Soviet period, but its modern form is closely tied to the Soviet-era *sovkhoz*. Essentially, though, the *obshchina* is a post-Soviet mode of property relations.

In contemporary Chukotka, however, the officially designated and recognized *obshchina* remains quire rare. Additionally, the *obshchina* has its limitations, as outlined by Gail Fondahl (1998: 105), including

spatial marginalization and legal uncertainties making petitions for land grants economically risky. Ultimately, the land remains federal property, and when services are present, they combine to form a socioeconomic institution not very different in structure from the *sovkhoz*. However, economic independence enables and encourages local political autonomy, providing a social space within which reindeer herders may practice their cultures.

Working among the Kola Saami, Yulian Konstantinov (2000) offers an explanation of sociopolitical changes at the local level by tracing variations in a structural continuity from the pre-Soviet to Soviet to post-Soviet periods. Essentially new reinterpretations of the Soviet-era *sovkhoz*, Konstantinov (2000: 49) draws links between the traditional Saami *pogost/sijt/sil'da* (i.e., local community) and Soviet and post-Soviet reindeer herding brigades. These brigades form sub-herds of reindeer and herders as a part of reindeer herding enterprises across the Russian North and are most recently derived from the organizational structure of the *sovkhoz*. Furthermore, the *sovkhoz* draws from and incorporates elements from the pre-Soviet past, which may explain the tenacity of the *sovkhoz* system in the post-Soviet period.

Konstantinov's basic hypothesis is that a line of continuity exists between the *pogost* (*sijt*) with the first collectives (*artel'* and *kolkhoz*) and the brigades of the *sovkhoz* and post-*sovkhoz* institutional development. The continuation of the use of brigades and the *sovkhoz* is not based in a revival of the past or on the requirements of the risks of private entrepreneurship, but rather with its link to previous groupings of small

reindeer-herding collectives (Konstantinov 2000: 50). This linkage is supported by the approximate sameness of *pogost* and brigade grazing territory (Konstantinov 2000: 51).

As an example of this historical linkage, Konstantinov (2000: 52) demonstrates that the first brigade of the reindeer collective *Olenevod* on the Kola Peninsula consists of eleven herders, including one cook and one trainee (*uchenik*). Ten of these herders are heads of ten families who live in the village of Krasnoshchel'e. These families and their kin are variously dependent on reindeer herding, which is practiced only by the male heads of family. In this social situation, the brigade possesses two aspects. First, the brigade acts as a small male spearhead (the brigade proper) which works for an extended time on the tundra, while another aspect of the brigade includes the herder's family and kin based in the village.

The reindeer herding collective "*Olenevod*" currently has four brigades, including approximately forty herders, which support the majority of the population of the village (which numbered 638 people in 1999) (Konstantinov 2000: 52). Konstantinov describes the *sovkhoz* and post-*sovkhoz* brigade as allomorphs of the *pogost/sijt/sii'da*, all of which are based on deeper structural constants of the minimal reindeer-herding collective. The *sovkhoz* is described as a collection of minimal collectives which have not changed important structural characteristics from previous historical variants. On a larger scale, partial sendentarization can be connected with the much more powerful and longer colonizing

and industrializing influences of the region compared with territories further east (Konstantinov 2000: 53).

It is important to note, however, that all of the territories used by the Kola Saami (and Komi and Nenets of the Kola Peninsula, who arrived in 1883-1884) fall under the administrative authority of the Murmanskaia *Oblast'* with its capital at Murmansk. Additionally, the town of Lovozero with a population of almost 4,000 serves as the administrative center of the reindeer herding collective '*Tundra*' and the population and cultural center of the Kola Saami (though the Saami are nevertheless slightly outnumbered by the Komi in Lovozero and in Lovozerski *Raion*) (Beach 1992: 116). *Tundra* is the largest *sovkhoz* on the Kola Peninsula, and prior to 1977 was organized as a *kolkhoz*.

The primary difference between the two forms of organization was political: in the days of the *kolkhoz*, herders were reportedly permitted to make decisions concerning the herd and its management, but under the *sovkhoz* these freedoms were limited. The *sovkhoz*, however, provided access to state capital, and therefore increased mechanization (Beach 1992: 119). Beach holds the opinion (1992: 141) that the structure of the *sovkhoz* is adequate to support reindeer herding among the Kola Saami, albeit at levels well below those enabled through subsidies during the Soviet period.

Among the Finnmark Saami, the *siida* and its traditional customary laws form the basic political structures for contemporary Saami societies. A number of events and conditions characterize current local political conditions among the Saami of Finnmark. Perhaps most

significantly, the Alta-Kautokeino dam incident threatened lifeways but reinforced solidarity. As well, reindeer-herding and the village community are seen as codependent, and a long tradition of semisedentarization exists alongside a regionally widespread consumption of reindeer products. These conditions encourage social stability by reducing tensions, and relations between the Saami and Norwegians seem to be improving.

In addition to relatively stable local political institutions, strong governmental protections and markets exist (with subsidies on reindeer products). A good infrastructural development facilitates marketing and a relatively amicable cooperation between the herders and government agencies facilitates successful management. Political stability is also promoted through the combined herding and wage-labor economic base for households, coupled with good social support programs (health care, veterinary care, food and clean water). The Saami of Finnmark possess legal assistance and representation through the Legal Aid Agency of Inner Finnmark (RIF).

Another local institution of reindeer management exists in Finnmark (and other reindeer herding counties) known as District Boards (DBs). These local control boards, however, are variable in their effectiveness (1998:249), and Karlstad suggests (263-265) that the failure of local institutions to effectively control herders' land use and herd sizes indicates a failure in the institution of the DB. Karlstad suggests that two main conditions must be met to devise effective local management: effective monitoring systems and a system of graduated sanctions.

Further, Karlstad proposes a flexible system based on user-governance, but subject to the oversight of Regional Boards if the local management does not deal with a situation. While this does imply a degree of autonomy, it also lessens the direct oversight of a local herding district by governmental authorities.

Chukotka's sociopolitical situation differs substantially from that of the Russian Saami, largely due to its status as an autonomous region (*avtonomnii okrug*). A discussion of the unique and yet bleak political situation of Chukotka is necessary for the understanding of more localized reindeer herding political structures. As in other parts of the former Soviet Union, reindeer herding farms were organized as either *kolkhozy* or *sovkhozy* and have been required, according to the Law for Private Property (*Zakon o sobstvennosti*) of 1990 and other restructuring laws, to reorganize into private enterprises (cf., above).

In Chukotka, the executive branch is headed by a recently elected, governor, Roman Abramovich, who took office in January 2001. Abramovich had been Chukotka's representative to the legislature for a year prior to his election and is known in Russia primarily as one of a small number of ultra-rich 'oligarchs' who made their fortune privatizing large state enterprises, primarily in the oil industry. However, in Chukotka Abramovich is seen positively by most because of the measures he has taken to alleviate directly the suffering of Chukotkans. He has established a charitable organization called "Pole of Hope" (*Polius Nadezhdy)* through which he paid people's back salaries, sent children to summer camps on the Black Sea, and sent shipments of food aid to

Chukotkan villages, among other things (Gray 2001: www.chukotka-ethnography.org).

The former governor, Aleksandr Nazarov, was originally appointed by Boris Yel'tsin following the collapse of the Soviet system and elected to the position in 1996. The governor wields considerable power, in part based on power allotted to him by law, in part based on the governor's considerable business interests. Both Nazarov and, especially, Abramovich, are very active in business spheres. However, while Nazarov acquired much of his economic power base locally, Abramovich came into the governorship with a considerable capital base acquired prior to winning the 2000 election.

Formally, two macro-institutions are subsumed under the executive branch of the Chukotkan government, and are ultimately extensions of the executive power of the governorship, First is the *Administratsiia* (administrative departments, i.e., the local executive structure), whose duties include the management of government administrative offices, telecommunications and postal services, kindergartens, dormitories and other schools, social and cultural clubs, hospitals and clinics, cafeterias, and in some areas, libraries. As well, the administration directs the implementation of policies regionally and locally, and at the local level provides social services and manages the budget, Subsumed within the *Administratsiia* is the *ZhilKommunKhozy* (*ZhKKh*) (best described as 'energy-housing-water departments,' or 'utilities') whose duties include the management, maintenance, and

operation of apartment buildings, electric plants, water plants, and industrial machinery and transport.

In comparison, the Lorino reindeer farm of Chukotskii *Raion* maintains control over its administrative offices, warehouses, garage, fur processing department, and the brigades of reindeer and their herders. However, even before the second farm restructuring, initiated in February 1998 (which reintroduced municipal government control through the granting of 51% shares of reorganized joint-stock company-farms), the Lorino farm was and remains dependent on the executive branch of Chukotka's government through its economic dependence on an officially 'private' enterprise known as *Sevsmeshtorg* in Chukotskii *Raion*. This store (which is apparently known as *Chukotorg* in Anadyrskii *Raion*), grants credit for food to counterbalance the lack of payment for labor, and in Lorino, all farm products (primarily reindeer meat) are 'sold' to the *Sevsmeshtorg*, administered by the executive branch.

Almost all of these 'departments' under the various administrations were originally a part of the *sovkhoz/kolkhoz* before restructuring. The expropriation of these services from the collective has significantly lessened the influence of the farm in the local community where administrative decisions are concerned. Considerable indirect (i.e., suggestive) influence, however, seemed to continue to be wielded by the current leadership of the Lorino farm, though did not significantly extend beyond the village and its concerns.

The executive branch of this government has control over a wide berth of social institutions. The local administration, as an extension of

the regional administration, also wields considerable influence and power at the local level, though local administrators explained that this local administration exists primarily to carry out the decisions made at higher administrative levels. An interesting condition caused by federal laws on local self-government is the practice in which the mayors of each of the villages of the region must remain 'semi-permanently' in the regional capital of Lavrentiia. This is primarily due to the political arrangement that all mayors are appointed by the Head of Administration (*Glava Administratsii)*. Furthermore, all local official documents prior to January 1997 were signed and authorized by the Mayor of Lorino, and after January 1997 by the Deputy Mayor of Lorino, who permanently and constantly resides in Lorino.

The mayor at the time (Fall, 1998; V. V. Shashkin) was in Lavrentiia and elsewhere while I was in Lorino, and he returned for a short time on the same incoming transport I took back to Lavrentiia. Furthermore, all local official documents prior to 1997 were signed and authorized by Mayor Shashkin, and after 1997 by Deputy Mayor V.A. Alek, who permanently and constantly resides in Lorino. All personal conversations concerning this situation revealed that the people are unsatisfied that the mayors are required to remain in Lavrentiia, seemingly in order better to enable their control by those who had more power (i.e. the Head of Administration for the district). Below is a schematic of power-structures in contemporary Chukotka:

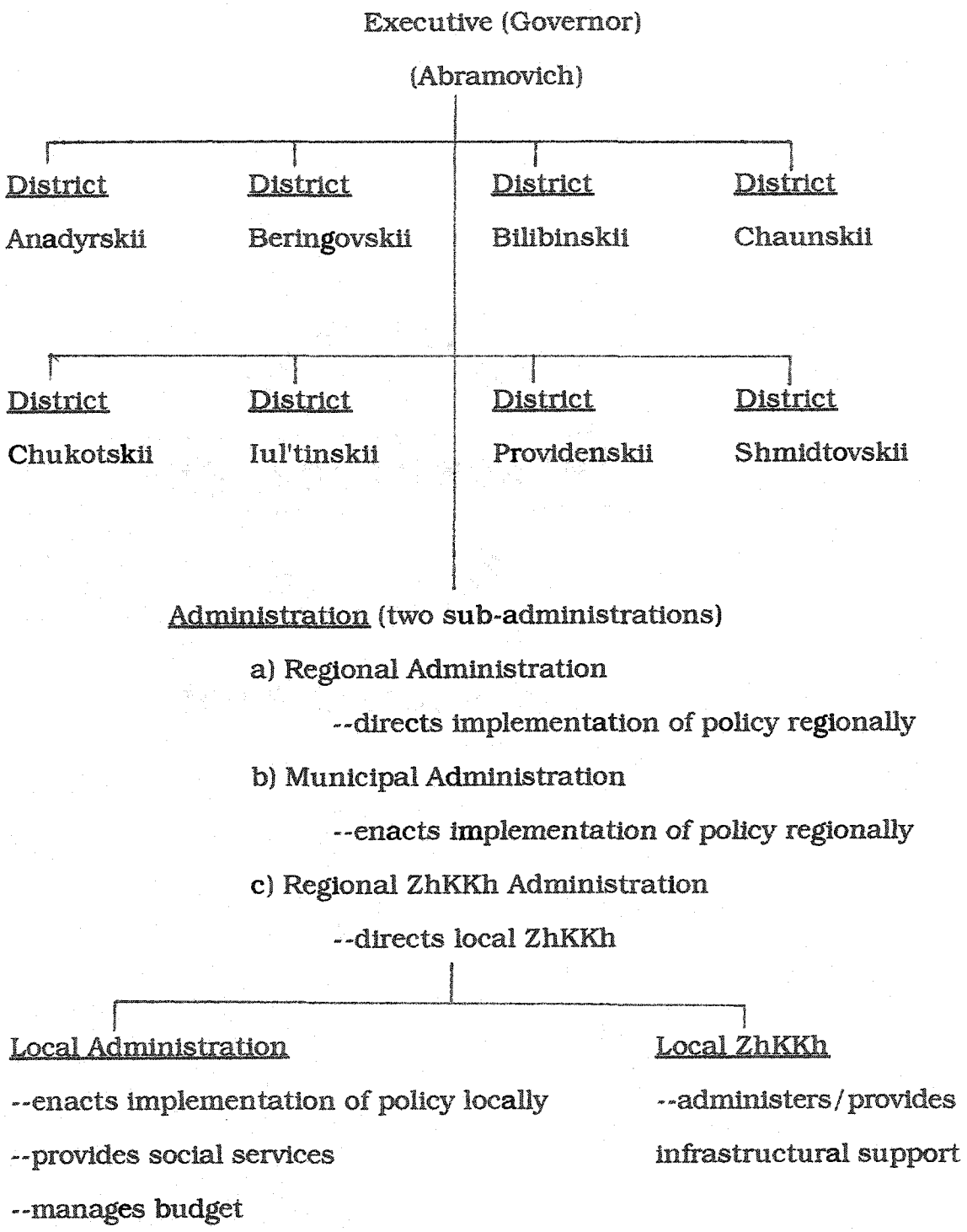

Figure 8. Local and Regional Government Structure in Chukotka.

As is evident, the executive branch of this government has control over a wide berth of social institutions.

As mentioned above, the practice of 'institutional hostaging,' in which the mayors of each of the villages of the region must remain 'semi-permanently' in the regional capital of Lavrentiia, provides considerable political power at the higher echelons of the executive branch.

Across the Bering Strait in the Seward Peninsula, the reverse of this situation is the case, and Iñupiaq local and regional councils and corporations maintain local autonomy and administer village or regional communities. The various local and regional tribal governments generally have different areas of responsibility (Bodenhorn 2000: 135). For example, the Bering Straits Native Corporation (BSNC) conducts economic and organizational duties on behalf of native shareholders. These shareholders elect a leadership, currently headed by Tim Towarak who acts as president and CEO. In addition to providing social services to shareholders, land issues such as mining resources and excavation of archaeological sites are managed, and scholarships and cultural opportunities are provided. Similarly, the Northwest Arctic Native Association (NANA), the other regional corporation on the Seward Peninsula, provides economic and political support and services. Though NANA is a much larger regional Native corporation than BSNC, it is within BSNC villages that reindeer herding survives.

Though reindeer herders at the local level on the Seward Peninsula are designated by family, many others from a village participate in daily reindeer herding activities. As a whole, both regionally and at the local

level, the most relevant organizational institution is the Reindeer Herders Association (RHA), which itself is a program of Kawerak, Incorporated, a non-profit arm of the Bering Straits Native Corporation. With programs ranging from education to housing, and natural resource management to economic development, Kawerak seeks to improve the region's social, economic, educational, cultural, and political conditions among the twenty designated tribes of the region dwelling in fifteen communities.

Working to ensure the success of reindeer herds in the region, the Reindeer Herders Association is consists of 18 private herd owners and three tribal councils. The Association seeks to enhance the economic base of rural Alaska by facilitating the efficient production, distribution, and marketing of reindeer products, and by improving herd management. More than half of Alaska's estimated 40,000 reindeer (in 2001), a total of about 25,000 (62%), are managed by herders who are a part of the Reindeer Herders Association, and most of these are located on the western portion of the Seward Peninsula (Reindeer Herders Association: 2001). In addition to these regional organizations, each village also possesses its own native village council, which works for and represents the economic, political, and other social interests of each respective community.

In addition to the local and regional Native corporations, political representatives are elected within legislative districts to serve in the Alaska state government, creating a multi-tiered governmental structure over native lands. Representatives are sent to the Alaska State

Legislature in Juneau, which possesses a lower House of Representatives (with two-year terms) and a higher Senate (with four-year terms). Currently, Dr. Bobby Olson, an Iñupiaq Native from the former reindeer herding village of Golovin on the Seward Peninsula (Senate District S), is serving in the Alaska state government.

Olson serves as the Democratic Whip for the Senate, a powerful position. Historically, a party whip maintains discipline and enforces attendance, and during Olson's tenure, the whip serves as a communicator of party policy. In addition to the party position, Olson serves on the powerful Senate Finance Committee, and on the Finance subcommittees on environmental conservation, the governor's office, and the University of Alaska (Millbrooke 2001: 1). Though as a local Native representative Olson currently lends a powerful voice to the residents of the Seward Peninsula, including its reindeer herders, within these regional and local power structures, Iñupiaq reindeer herders possess no particularly exclusive formal political powers; however, they do tend to possess prestige-status if the herd is healthy, and work and reindeer resources are available.

LOCAL-REGIONAL SOCIAL ORGANIZATION AND IMPACTS ON REINDEER HERDING IN THE CONTEMPORARY WORLD

The volume and pace of change forced on or adopted by reindeer herders in the post-Cold War era has meant that social change has been significant, particularly in the former Soviet Union. As the nature and

the rate of this change varies, coupled with particularistic historical situations, change manifests differently between reindeer herding populations. The nature of political change, too, varies, usually in legalistic ways in Fennoscandia and Alaska, but in deep, structural ways in the former Soviet Union. Nevertheless, previous forms of social organization persisted throughout the Soviet period and beyond, and continue to be used as conceptual bases for reorganizations or reinterpretations with powers beyond the local.

Local political behavior largely determines the course of policy decisions. Sociopolitical organization is partly dependent on the actions of individual political actors. Furthermore, all of the sociopolitical structures described in this dissertation derive either from the reindeer herder's culture, or the culture of the governing power. As will be demonstrated, many of these traditional political structures are based in earlier traditional structures which have simply been modified by outside influences or by reactions to experiences. Likewise, the local political situation is based on earlier preconditions which led to current conditions within a regional and global context.

Social structures and institutions in Russia, especially, have undergone significant changes in the post-Soviet period. The implementation of Russia's privatization program (1993-1994) seriously disrupted the viability of *sovkhozy* and *kolkhozy*, and especially affected those farms oriented towards reindeer herding. Often dependent on the Soviet Russian state political system and its social and economic institutions, severe hardships have become commonplace among reindeer

herders and herds. Former state farm and collective farm reorganizations stripped many social services from the control of the farms, placing them under the control of regional administrations. These administrations, however, have proven unable or unwilling to supply social services or foster free market reform among reindeer herding enterprises consistently, as required by national reorganization plans.

This inability has threatened perceptions of power legitimacy among the populace and has caused current structures to emerge as symbols of power use and abuse. Many of the problems endured by reindeer herders and their herds, however, have their origin in the Soviet period, and still limit the viability of reindeer herding as a sustainable market-oriented enterprise. Ironically, a new shift towards familiar old structures is now being promoted in some areas of the Russian north, with a realization of the limited viability of producing and marketing reindeer products as a capital enterprise.

The newly emerging and increasingly authoritarian power structure of the Chukotka Autonomous Okrug has begun raising state involvement in local economic affairs, particularly among the so-called 'reindeer enterprises.' The programs of reorganization increasingly create conditions similar in nature to those in place during the Soviet period, such as a reliance on the state for economic well-being. For example, many individuals within current power structures were formerly members of the communist party and simply realigned themselves politically as power shifted away from communist party control. This maintenance of

access to power structures was effectively an abandonment of old and adoption of new symbols of power legitimacy.

As the economy steadily worsens, largely due to infrastructural neglect and decay, political solutions are promoted bearing similar qualities to the collective organizations of Soviet times. As symbols of a former time of stability, these 'new' programs have been accepted by many reindeer herding enterprises, offering legitimacy to the existing power elites. The emerging legitimacy of this corrupt, authoritarian political structure is increasingly based on control and distribution of food and fuel resources. This imposition of the outside world through structures of power onto the local reindeer herding community occurs throughout the circumpolar North, though manifestations and degree of power imposition vary. In most cases, however, state control of resources, particularly land, is paramount.

In Finnmark, for example, 96% of the land is owned by the Norwegian government (Pedersen 1991: 69). As land-owner, political and legal rules are forced onto the population dwelling on or depending on resources from the land. These government regulations affect hunting and fishing as well as herding, and must be followed whether or not they are in accordance with local customs. This situation differs from other counties in Norway and until 1972 was unchallenged. This, combined with the protests of the Alta-Kautekeino hydroelectric dam project, led to the Crown's reconsidering of its own land rights and the formation of the Royal Commission on Saami Rights.

This difference in how Norwegian political institutions affect Saami in other counties is marked. Smaller communities in other more southerly areas have legal protection of inherited rights to use so-called common lands. These common lands are defined as delimited areas where local people are in varying positions of exercising control over the utilization of resources (Pedersen 1999: 129). Nevertheless, a gradual disappearance of Saami rights over their territory accompanied the rise of Norwegian Crown power following the separation from Denmark in 1814. The recovery of these rights from the Norwegian Crown has characterized political institutional relations ever since (see "Customary Rights" in chapter 6 "Reindeer Herder Relations with the State and Industry" for more information on these changes).

In contrast to the other case studies, reindeer herders in Alaska have an array of relationships with various governmental and corporate regimes of regulation that determine what lands may be grazed. Since some of the land is controlled by Native corporations, these entities possess decision-making rights concerning land use and resource consumption. Due to the often patchwork-like nature of land ownership on the Seward Peninsula (and throughout Alaska), reindeer herders must adhere to various regulations. Nevertheless, I was able to observe herds grazing at will across lands owned by a variety of organizations, often without the necessary permits. This seemed unimportant, however, to all involved at the local level.

The reindeer herders of Alaska have long been regulated by a number of bureaucratic institutions. Besides the need to obtain grazing

permits from land management agencies such as the Bureau of Land Management (BLM), limits on herd size are in place to prevent overgrazing. Additionally, once the herd size exceeds its limit, excess animals must be eliminated. Consequentially, this limits the number of reindeer available to produce meat and antler-velvet for local communities and commercial markets (Simon 1998: 294). Finally, Alaskan state and U.S. Federal business and commercial laws affect the conduct of reindeer herding among the Iñupiat, usually in the form of production and trade regulations and permitting.

Another contemporary social organizational type among reindeer pastoralists found in some parts of Scandinavia and Russia is the herding association (Konstantinov 1997: 15-18). These organizations attempt to provide formal, legalistic collective management of herd resources to supply both subsistence needs and market demands. This formalization of herd management corresponds to the transition from true pastoralism to a variation of ranch-type herd management, as well as a shift from intensive herding (strict herd control) to extensive herding (little or no control) within lands under private or collective group ownership. More discussion of these herding associations and their relations to the state is provided below in Chapter 6.

Each of the case studies offers insight into the nature of local social organization and its relations with broader organizations, particularly from the state. What has emerged in each case is a synthesizing or the co-existence of locally developed institutions and institutions from elsewhere, most often stemming from the political and

material cultures who are predominant in the nation-states in which reindeer herders dwell. The demands placed upon local communities of reindeer herders from the outside significantly influence the viability of reindeer herding, both as a subsistence endeavor and as a capital enterprise. Specific discussion and evaluation of relations between reindeer herders and the state and industry will be discussed at length in a later chapter.

ECOLOGICAL ISSUES AFFECTING LOCAL REINDEER HERDING COMMUNITIES

While ecological situations undoubtedly affect the behavior of both humans and reindeer, human reaction to both reindeer and environmental change is first and foremost a social behavior. Such behaviors, having their root in human culture, are often perceived as separate from nature. However, by extension of the conditions usually ascribed to 'nature,' human sociocultural behaviors are natural for humans, especially from the hypothetical perception of a non-human observer. This includes reindeer, of course, which act as a dynamic part of the reindeer herder's endeavor, and each organism, human and reindeer, reacts behaviorally to stimuli from the other. This interaction provides the most relevant and symbolically important behavior, reinforcing the herder-herd bond.

Most fundamentally, an ecological approach to the study of human cultures, or cultural institutions, focuses on the complex relations

between humans and environments. Just as humans effect the environments in which they live, so too do these environments, in part, shape human economic, political, and social lives. Furthermore, human populations interact with each other on the landscape within socially constructed environments and naturally occurring ecosystems. Human populations do not interact with all aspects of the environment but only with those elements of an environment that comprise a population's habitat.

Within an environment, a human population defines its habitat along symbolic/cultural lines, with particular orientations manifesting themselves as adaptations and institutionalized as culture. Within a particular culture, specific techniques of technological innovation occur to extract resources from the environment, to alter the natural environment to suit the habits of a population, and to build a knowledge of plants, animals, climate and tools with which to facilitate culturally induced change (Salzman and Attwood 1996: 169). This interaction, coupled with the sociocultural environment of regional populations, in part determines the focus of an ecological anthropological approach to human cultures and their institutions. It should be noted, however, that this process does not imply a functional, solipistic approach.

Reindeer Herders as Humans in an Ecosystem

There are three forms of human-animal productive relations among reindeer pastoralists: breeding, herding, and taming (which includes

incorporation into the household). The first form of pastoral-like relations between humans and reindeer was the taming of deer, primarily as decoys for hunting. It seems that only among reindeer pastoralists did a transition from hunting directly to pastoralism occur, without an intervening period of agriculture. This shift occurred, however, at a relatively late period compared to other forms of pastoralism and likely occurred in part because of the limitations of taiga and tundra for agriculture. Other factors such as taxation and trade also encouraged this shift. Furthermore, the introduction of deer into the household as decoys required their incorporation into existing social structures according to present divisions of labor. Ultimately, the introduction of tame reindeer and their eventual domestication served as a substitute for humans as suppliers of labor.

One of the most intriguing and rational perspectives on the role of humans as a species of various ecosystems is Tim Ingold's (1992) approach to culture and the perception of the environment. Ingold begins by explaining (1992: 39) that the central tenet of ecological anthropology is that the relations between humans and their environment are mediated by culture. In effect, cultures are the screens through which the individual or institution receives environmental stimuli for interpretation, albeit usually subconsciously. Ingold clarifies this concept by explaining that cultures are systems of symbols through which humans impose their symbolically constituted designs upon the external world.

Through these culturally derived, maintained, and reproduced symbols, people survive through continuous interaction with their environments, constituting the life-process within which all organisms must act (Ingold 1992: 40). Ingold explains (1992: 42) that an organism fits the world to itself, ascribing functions to the objects it encounters and mapping its internal organization onto the outside world. By extension, then, beyond the organism, the environment is simply an array of neutral objects. There is, of course, a difference between the *Umwelt* (natural environment) of humans and animals. Ingold further explains that a process of perception is also a process of action (Ingold 1992: 45). Furthermore, due to the existence of language, perceptions are shared because people organize their sensory input in terms of conventional categories. Sociality, then, is perceived to be present from the start, *prior* to the objectification of experience in cultural categories, in the direct perceptual involvement of fellow subjects immersed in joint action in the same environment (Ingold 1992: 47). This serves to tie humans and non-humans in a dynamic relationship with their environment and each other. This dynamic relationship includes interdependent, open, and nondeterministic qualities. Consequentially, Chukchi reindeer herders, for example, perceive their environment, and their relations to other aspects of their environment, differently than do Saami reindeer herders, leading to differentiation in the defining of various resources and their relative economic values.

Ingold concludes that for these reasons, it is fundamentally mistaken to model the ecological relations between humans as a

confrontation between humans and nature. First, humans do not experience the environment as a 'blank slate,' but as a structured set of possibilities in the context of current action. Through the acquisition of environmental knowledge and productive practice, which are inseparable, action within the world is the practitioner's way of knowing an environment. Therefore, culture is a framework not for *perceiving* the world but for *interpreting* it, though Ingold points out that much of what we perceive we fail to interpret (Ingold 1992: 53).

As an environment of 'neutral' objects, the concept of nature and the environment is not pre-existent, but rather a product of an interpretive, culturally specific stance. Not only does this mean that there are really never any 'neutral' objects in an environment, but also it requires individual humans to separate themselves from the task at hand, and may be something only humans can do through their capacity for self-awareness. Ingold suggests that because we are meaning-making animals, humans can also confront the "specter of meaninglessness," Therefore, systems of cultural classification are not a precondition for practical action in the world, but are invoked to recover the meaning that is lost when that action turns reflexively inwards on the self (Ingold 1992: 53).

Among reindeer herders, then, interpretation of perceptions of the environment, and meaningful participation in that environment, is filtered through the cultural construct of symbols which relay meaning between the perception-action-reaction of the individual or institution with the environment. Through the objectification of experience,

reindeer herders encounter their environment through particularistically reindeer-oriented avenues of symbol-traditions. This, of course, can apply to any cultural behavior or institution within the context of its environmental experience. Therefore, a reindeer herder's experience of an ecosystem is tied to reindeer themselves, and differs from populations whose resource definition and extraction techniques focus on other productive aspects of the same ecosystem and environment.

Humans and Reindeer as a Part of Each Other's Ecosystem

The basic and broadest behavior of reindeer in the wild (i.e., as caribou), is as a year-round free-ranging herd animal. As such, herd health and size fluctuate widely, and often animals succumb to natural hazards including icing of pastures, very cold winters, very heavy snowfalls, and summer epizootics (Krupnik 1993: 166). Epizootics include especially anthrax and necrobacillus (hoof-and-mouth disease), although according to Krupnik (1993: 154) anthrax does not occur in northeastern Siberia. Icing of pastures occurs when precipitation falls as rain or freezing-rain, but then freezes over the tundra, or when existing precipitation on the tundra melts then refreezes, making access to food through the ice by reindeer difficult. Icings can occur in autumn, winter, or spring. Krupnik goes on to point out that any change affecting reindeer also affects their pasturage, which in turn affects the physiological condition of the animal and reproduction rates. This causes drastic fluctuations in size, demonstrated by the increase in the

Western Arctic Caribou Herd from 75,000 animals in 1976 to 463,000 animals in 1996 (Fitzgerald 2002: 4).

As humans interacted more frequently with reindeer, the two populations became increasingly interdependent in the Eurasian North. Leonid Baskin explains (2000: 24) that sophisticated methods of hunting, when humans used knowledge of migratory routes as well as directing reindeer herds to stone traps or to human settlements, were the first stages of reindeer husbandry. This marks the point where the two species, *Homo sapiens* and *Rangifer tarandus*, began to become codependent. The advantage of reindeer husbandry over hunting is the guarantee of labor with the option of harvest at any time.

An important factor for the success of a reindeer herd is the herder's depth of knowledge about the herd's animals. Herders recognize their animals by particular behavior and color, knowledge highly valued in most reindeer herding cultures (Jernsletten and Klokov 2002: 20). An intimate understanding of the behavioral dynamics of a herd, coupled with a sustainable male-female ratio, is critical to its success. A well composed herd is easier to manage than one assembled opportunistically (Jernsletten and Klokov 2002: 20), since the herd forms the community for individual reindeer. Incongruity and unfamiliarity between individuals in a herd can elevate stress levels and lead to a decrease in overall herd health.

Just as a herd and its herders must interact in a cooperative, co-dependent way, the wider ecological consideration of multiple herds and their herders must be considered. Herders themselves, like their deer, are

an integral part of the ecosystem, and as such they must foster relations between herders and their families. These relations have taken many forms among reindeer herders, but all these sustainable social organizations, and by extension the inclusion of herds into such social organizations, are currently undergoing rapid changes, mostly in reaction to national power structures and demands. While this has long been the case in some areas, particularly in western Eurasia, in eastern Eurasia changes have come later. These changes, usually imposed from national or regional governments from above, are administrative endeavors based on social institutions indigenous to the encompassing national culture.

In Norway, the change has taken the form of 'husbandry units,' which are intended to replace the indigenous Saami community system known as the *siida* (for more information on the *siida*, see above). In fact, the *siida* is, simultaneously, the herding unit, pasturage and all other resources, and the household. In Russia, socialist reorganizations of agriculture, including the reindeer herds, led to the amalgamation of many smaller herds into large herds, with families being divided into herding brigades. These brigades persist as organizational foci among reindeer herders throughout the Russian North, even with the transformation of *kolkhozy* and *sovkhozy* in post-*perestroika* Russia into various other types of enterprises (Jernsletten and Klokov 2002: 21).

David Anderson (2000) provides an additional perspective on the relationship between reindeer and humans. He explains (2000: 153) that the various groups interested in reindeer, whether scholars or herders, hunters or activists, comprise constituent parts of the reindeer's ecology

through their discussions and actions. Locals, politicians, and scientists of all sorts with interests in reindeer help to shape the ecological reality within which reindeer dwell. Each, of course, also has particularistic perceptions of reindeer populations and reindeer herders, and different *kinds* of knowledge about *Rangifer tarandus*.

As an example, D. Anderson (2000: 162) points out the high likelihood that locals (in this case in nineteenth century Québec) could identify caribou calving grounds (and hence herds and population). While this is reportedly not difficult, it does demonstrate the cooperative, beneficial use of particularistic perceptions or reindeer. Gary Kofinas, too, reports (1998: 171, quoted in D. Anderson 2000: 162) that Gwich'in hunters identified consistently calving grounds of *Rangifer tarandus grantii* to scientists as early as the 1940's, but not until the 1950's was this information acted upon by biologists. D. Anderson concludes (2000: 168) with the recognition that an alliance of interests between scholarly and local circumpolar communities can be forged and that conflicting interests, and therefore conflicting anthropogenic ecotypes, *can* be resolved in ways beneficial to reindeer, herders, and scholars.

The Ecology of Reindeer Pastoralism

The ecology of reindeer herding involves a habitat specific to both humans and reindeer. These two species are interdependent within a herding relationship. Therefore, the important symbiotic relationship between humans and reindeer must be considered. Importantly, reindeer

are dependent on predation to enable maximum herd strength and optimal herd size. This predation is primarily carried out by humans and canids, especially wolves. Under conditions of pastoralism, predation decreases, effectively allowing herd size control to become unchecked. The resulting exponential herd growth provides a surplus for human pastoralists and ranchers who essentially remove access to most of the surplus from other predators (Burch 1972: 357). However, three ecological preconditions for the growth (i.e., maintenance) of herds must be taken into account: the herds must be generally constantly followed, the herds must be exploited with compensatory selection, and the herds must be protected from competing non-human predators.

Importantly, the implementation of social rationalizations by pastoralists not only affects the herd, but also the ecology of the herd's range. Because even pastoral herds (which are only semi-domesticated) will maintain similar migration routes and grazing grounds, increased predation will be endured for a period before an alteration of migration patterns occurs. This can lead to epidemics, starvation, and subsequently, population crashes (Paine 1988: 40). Therefore, pastoralism is chronically unstable, and sudden herd crash is always a possibility. These natural causes must be considered alongside pastoralists' tendency to increase herd size to a maximum, or even beyond, which also can result in a herd crash.

Herd size is a factor of subsistence needs, external economic demands (i.e., taxes and trade) and the natural topography of an area. These combine with techniques and technologies for herd management to

set maximum and minimum practical boundaries of animal population size. High degrees of population fluctuation and an optimum size occilate between these limitations. Herd sizes among pastoralists, especially among reindeer pastoralists of northern Eurasia, usually tend towards the maximum limits, often resulting in a 'herd crash,' in which severe depopulation occurs, only to be replaced as soon as possible (Paine 1988: 159-160).

Pastoralism encourages the tendency for herd maximization, enabling an accumulation without the need, or often possibility, for exchange. The presence of a market offers the pastoralist a direct source of surplus exchange, which leads to a condition of extreme herd maximization (Paine 1971: 166). This increasingly extensive form of pastoralism leads to the condition of 'ranching,' which itself includes a divided access to live property and a relation between humans and reindeer that is essentially predatory, as occurs in a condition of reindeer hunting. Furthermore, this transition entails a division of pastures (i.e., private ownership of land). It should be noted that even though a decline in the frequency of herd following usually accompanies an increase in the use of extensive herding techniques, this is not always the case. For example, the Chukchi are known to combine extensive herding with constant herd following.

Some of the difficulties of reindeer pastoralism include the use of only semi-domesticated stock, a condition reinforced by extensive herding techniques. Also, tundra and forest-based pastures are quite fragile and highly variable in quality. This causes a variation in the

quality of the reindeer as a product, and this variation in quality becomes more pronounced under conditions of extensive herding and husbandry. However, among the Saami, ranching is practiced as a livelihood first, and as a business venture second. As a financial venture, such practices as selective breeding, herd maximization, and hunting of competitive predators occur. Finally, ranching involves private access to both territory (land) and herds (capital).

Ingold's hunting-pastoralism-ranching scheme (1980) of the transition of reindeer-based economies allows for an analytical division of reindeer pastoralism into an evolutionary sequence. The advantage to this classificatory scheme is its recognition of the continuation of sociocultural processes that enable the transition from one form to another in reaction to ecological, economic, and political conditions. Furthermore, by dividing the evolution of reindeer pastoralism into hunting, pastoralism, and ranching, the economic bases and interconnections can be readily illustrated. Ecology and culture constantly define and redefine the nature of reindeer as a resource.

An important consideration in the study of pastoral nomads includes characteristics of grazing, including the amount of pasture available, the distribution of pasture, nutrients provided by pasture, and the technological features of grazing provision (i.e., laying up of fodder or burning of pastures for rejuvenation). It is important to note that perceptions of pasture are relative to the sociopolitical and ecological interpretation of choices, and therefore potential and actual pasturages co-exist and vary highly. The ecology of reindeer husbandry, while based

in the biophysical systems of humans and reindeer, is constantly changing. These changes include the natural variations which occur in the environment inherent to any dynamic system. In the contemporary world, however, the human population explosion along with industrialization and raw material extraction are significant factors in determining the nature of the ecological situation of reindeer and their herders.

Ecology-oriented Concerns

Among the four case study populations, reindeer pastoralism was complemented by other subsistence activities, especially sea-mammal hunting, fishing, and among the Iñupiat, caribou hunting. Unlike sea-mammal hunters, however, the nomadic reindeer herding community did not traditionally function as an integrated social and economic unit. Instead, the household headed by the oldest able-bodied male owned domestic reindeer as private property. The economic strength of each family, then, directly depended on the owner's herd size, and the prosperity of a herd was directly linked to the prosperity of the herders and their families.

Another relevant issue to be discussed here is icing: a weather phenomenon which leads to the melting and refreezing of ice over pastures (introduced above). This often prevents reindeer access to food, since reindeer have difficulty breaking through the ice to get to the vegetation underneath. While icing occurs throughout the reindeer pastures of the circumpolar North, certain areas are more prone to icing

than others. On the Seward Peninsula, icing was a severe problem in the 1940's (Schneider 2002: 3) and has been occurring intermittently over the last decade. Across the Bering Strait on the Chukotskii Peninsula, however, icing has been common and the results devastating over the last decade. Many reindeer have starved due to icing, and are usually slaughtered well before death to enable the acquisition of some meat. In regions inhabited by Saami reindeer herders, as in inland regions of Chukotka, it seems, little threat is posed by potential icings.

Related to icings are conditions of lessening snowfall. Willian Schneider reports (2002: 6) that reindeer herders on the Seward Peninsula are experiencing lower amounts of snow recently, limiting the accessibility to herds. With heavy reliance on snowmobiles to reach and manage herds, low snowfall results in more difficult traversing of terrain and a much higher increase in damage, and therefore costs, in maintaining snowmobiles and other transportation equipment. Such concerns about lower snowfalls are not present in the literature on reindeer herders of the other case study areas, and no such concerns were expressed during fieldwork in 1998 in Chukotka.

The major predators of reindeer throughout the circumpolar North include wolves, primarily, and to a lesser extent wolverines and lynxes. While these predators are a significant threat in central and eastern Eurasia, and in North America, they pose few problems in northwestern Eurasia. In Russia, these predators take an estimated 5-10% of the total reindeer livestock every year (Jernsletten and Klokov 2002: 57). On the Seward Peninsula, little information has been systematically collected on

predators; however, reindeer herders explain that predators follow caribou into the peninsula, but often do not depart with the caribou. On the Bering Sea Islands, however, predators are a non-existent problem (Jernsletten and Klokov 2002: 81). While these animal predators pose little threat to Saami herders in Norway, human predators, in the guise of small game hunters, are nevertheless disruptive (Jernsletten and Klokov 2002: 103).

In the three decades from 1976 to 1996, the Western Arctic Caribou Herd grew by six times, shifting the winter range to the west into the Seward Peninsula (Fitzgerald 2002: 6). Though caribou lived throughout the Seward Peninsula in the nineteenth century, a crash had occurred which led to the introduction and eventual adoption of Saami reindeer and reindeer herding. By 1996 approximately 100,000 caribou had migrated into the Seward Peninsula, and by 2000 that number had climbed to a quarter of a million (Fitzgerald 2002: 6). This movement into the Seward Peninsula by caribou has severely disrupted reindeer herding as a whole in Alaska, and today only 17,650 reindeer are present in the state, with only 10,000 on the Seward Peninsula. This number is down from an estimated 640,000 reindeer in 1932 (Jernsletten and Klokov 2002: 73). William Schneider (2002: 3) reported that this high number in the 1930's was in fact an overpopulation which led to depletion of lichens and other food sources. This, coupled with changing herd management strategies, disease, weather, and caribou, led to decline in herds.

At least fifteen herding areas have been overrun by caribou resulting in the loss of many herds. In an attempt to lessen the impact of the caribou, the creation of 'safe areas' from caribou for reindeer has been proposed. Logistically, though, this would be difficult, making use of natural barriers, and would unlikely be completely reliable, since both compete for same food resources (Schneider 2002: 10). An alternative was proposed, however, through the use of radio collars placed on select reindeer to track herd movement and compare locations with caribou herds which would also be fitted with radio collars (Schneider 2002: 11).

In Eurasia, wild reindeer have become an invasive problem only in the central and eastern regions. On the Taimyr Peninsula, the population of wild reindeer is now estimated at 600,000. On Wrangell Island, north of Chukotka, a population of three thousand feral deer seems stable, and has been harvested since 1993 on a small scale (Baskin 2000: 27). At the same time, Baskin also reports on possible reindeer population crashes on Bering Island near Kamchatka, and in the Laplandskiy Nature Preserve in northwest Russia. Baskin also reports that for northern Eurasia, fluctuations of wild reindeer numbers have a periodicity of 115-130 years (Baskin 2000: 24).

In Chukotka, wild reindeer (*dikie oleni*) present one of the most serious threats to reindeer herding. With little to no ammunition available, herders must often resort to attempts to scare away caribou, or simply accept the loss of reindeer to caribou herds. One herder in Lorino expressed to me a desire to revive old weaponcrafting techniques to fashion spears and bows to try to prevent interloping. Every herder or

administrator interviewed expressed frustration over the increasing populations of caribou and their associated problems. Jernsletten and Klokov (2002: 59) mirror these concerns over caribou among Russian reindeer herding enterprises, explaining that caribou pose three main threats: leading away of domesticated reindeer, negative impacts on reindeer pasturage, and the transmission of diseases from wild to domesticated populations.

SUMMARY

Focusing within a broad historical process on the institutions that are a part of indigenous reindeer herding practices, this chapter demonstrated cultural continuity among reindeer herders. The many continuing connections between older, indigenous reindeer herding institutions and contemporary institutions shows the relative, and unequal, impact endured from their incorporation into the nation-state to, eventually, the global economy. Those who maintained some traditional forms of social organization, such as the Saami of Finnmark, have been more able to successfully continue reindeer herding, both for subsistence and for commerce. Others, such as the Saami of the Kola Peninsula, have also been able to obtain a reasonable degree of socioeconomic stability. This is in part because of the similarity of indigenous institutions to the organizational aspect of the reindeer herding brigades that comprise a former collective farm.

The Chukchi, by comparison, are suffering acute hardships within their reindeer herding endeavors, and current organizational forms, imposed from above during the Soviet and post-Soviet periods, are proving inadequate. Comparatively, Iñupiat reindeer herders have been able to integrate reindeer herding successfully into their non-reindeer herding culture. Focusing on the family and community for organization, and drawing on indigenous organizational concepts such as that of the 'whaling captain' and crew, production for subsistence as complementary to other subsistence resources continues to be successful and adequate, despite decreasing production for commercial markets. As a combination of local social organization, local and regional ecological conditions, subsistence production, and institutions imposed from the outside, reindeer herding's future as a capital-based enterprise can be called into question for all four case studies. This will be investigated in the following chapter.

CHAPTER 5

REINDEER HERDING AS AN ECONOMIC PROCESS

INTRODUCTION

This chapter focuses on how the organization of production contributes to the decline of reindeer herding in general and accounts for local variation. Besides investigating methods of production, distribution, and consumption of reindeer products, the reproduction of herding knowledge, ecological limitations, incidental waste, and intentional discard is also considered. This is important in understanding the decline of reindeer herding in a global context since reindeer herding has become in part connected to the global economy. This chapter, then, traces reindeer products from their inception as land and animal to its consumption. Issues of land tenure, labor, and mechanization, and their place in the economic process are also considered. The role of the global economy in the economic process of reindeer herding is significant and greatly influences the economic viability of reindeer herding, even as a subsistence economy. Furthermore, ecological issues greatly influence the economic process, and their effects on the production of reindeer products are discussed.

Reindeer herders have made use of a wide variety of economic systems, often simultaneously, to obtain the resources needed for survival or trade. This chapter discusses especially their latest

manifestations. These systems are based on both pastoral subsistence needs and involvement in capital markets. Involvement in market trade and integration into markets has occurred over centuries among some reindeer herding populations, and is relatively new to others. Nevertheless, all reindeer herding populations have been in contact with nation-states for many generations, which affects access to pastures, changes in land tenure systems, and causes a general siphoning-off of the population into other economic pursuits. This movement away from reindeer pastoralism to wage labor is often fostered by unequal or unfavorable trade situations (Koster and Chang 1994: 2). In addition, reindeer herders and the lands upon which they depend have been at times radically affected by development programs enacted by governments, and these development attempts have become a part of the social landscape of reindeer herding communities.

This chapter, then, focuses on the economic factors of production, distribution, and consumption of reindeer products. Emphasis is placed on production since the consumption of reindeer products is invariably tied to issues of distribution, including access to storage, processing, and transportation infrastructure. Initially, a general discussion of economically relevant topics will be provided, followed by specific application to the case studies. In addition, issues of marketing, subsidies, and compensation will be discussed.

SOCIOECONOMICS AND THE ORGANIZATION OF PRODUCTION

Any socioeconomic inquiry into systems of reindeer herding requires an exploration of relations of regimes of subsistence and capital markets. Fundamentally, reindeer herding is a subsistence activity. As a basically pastoral economic activity, it often includes nomadism or partial nomadism to facilitate access to pastures and other, human needed resources. Reindeer pastoralism is also a food-producing economy, and in times of production surplus, meat and furs in excess of production and consumption needs can be used for other purposes such as trade or taxes. This is not to imply that pastoralism is some form of primitive capitalism, but instead that the two systems--reindeer pastoralism and market capitalism--are co-existing forms of economy. Capitalism, because it is based on the exchange of products through the medium of money, facilitates the distribution of reindeer products, while reindeer pastoralism is ultimately based on the natural reproduction of herds (Ingold 1980: 3).

A late twentieth century socioeconomic study of reindeer herding is, then, the study of amalgamated systems comprised of subsistence-based reindeer husbandry and global market capitalism. This includes a recognition of the trend towards more diversification in systems of pastoral production, and the accessing of many non-pastoral based economic structures to supplement pastoral production. Pastoral production and its wide variations possess certain common elements, however, including patterns of ownership, labor extraction and

maintenance, appropriation of surplus production or value, and managerial authority. Though authority and the politics of reindeer herding will be discussed in detail in the following chapter, references to political action in the economic sphere of reindeer herding such as subsidies, access to resources (particularly pasturage), and access to infrastructure must be considered.

Reindeer Herding as a Subsistence Economy

Subsistence continues to be of paramount importance to the cultural survival of circumpolar peoples. Subsistence as used here refers to the cultural practices that are necessary to support lifeways, including traditions and beliefs, which are concerned with how sustenance may be derived and reproduced by society. Subsistence, then, is more than acquiring a minimum of sustenance for survival, but includes cultural symbols and institutions that enable the practice and reproduction of a society. As Barbara Bodenhorn describes subsistence,

> "...it [subsistence] is not just about getting food on the table; it is also the proper way of conducting social relations among humans and between humans and animals" (2000: 133).

Among reindeer herders, this human-animal subsistence relationship is also applicable, but rather than as hunters (as Bodenhorn's description of Iñupiat subsistence hunters above), as herders of animals. As outside influences redefine the parameters of

reindeer herding as a subsistence lifeway, so too are the subsistence behaviors of herders redefined. This has occurred among all the reindeer herding societies in the case studies, which results in a shift in the manner of the transmission of herding knowledge from one generation to the next. Many have lost the techniques of reindeer herding and related subsistence activities altogether, threatening the future viability of reindeer herding as a subsistence activity. This is not to say that reindeer herding as an institution is dying among the Chukchi, Iñupiat, and Saami, but that its success as a subsistence-supporting economic activity is threatened.

Among these four populations, reindeer pastoralism was complimented by other subsistence activities, especially sea-mammal hunting, fishing, and among the Iñupiat, caribou hunting. Unlike sea-mammal hunters, however, the nomadic reindeer herding community did not traditionally function as an integrated social and economic unit. Instead, the household headed by the oldest able-bodied male owned domestic reindeer as private property. The economic strength of each family, then, directly depended on the owner's herd size, and the prosperity of a herd was directly linked to the prosperity of the herders and their family. For example, among the reindeer herding Chukchi, wealthy families ate 2.5 times more reindeer meat than did poorer families (Krupnik 1993: 90-91). It should be noted, however, that structural similarities between reindeer herding populations were reached in historically different ways and at different times.

Tim Ingold further elaborates on the rank aspect of subsistence reindeer production in general:

> I have demonstrated that the ecological foundations of pastoral accumulation lie in the interspecific association of herd-protection. It follows that this association *results* from the application of a rationality inherent in social relations of production which specify that access to animate means of production is divided, as between individuals or domestic groups. Accumulation is as much a property of the infrastructure of pastoralism as is sharing of the infrastructure of hunting. (1980: 202)

Therefore, the unequal accumulation of reindeer is an expected consequence of an ecological condition: the interspecific association of herd-protection. Even within subsistence conditions, reindeer herders are interested in many cases in maximization to produce a 'resource buffer,' which can help to prevent disaster in the form of too little food or lack of breeding animals to reconstitute a collapsing herd.

This unequal access to reindeer products among subsistence reindeer herders and their resource base resulted from gradual overpopulation (Krupnik 1993: 124). In general, this led to the emergence of unequal property relations with reindeer herding communities, and the gradual abandonment of reindeer herding by some individuals. These displaced herders would often become attached to wealthier households as assistants or join sedentary permanent villages (Ingold 1980: 202-203). Today this desertion manifests in the form of

migration to urban centers in hopes of finding wage-labor jobs unrelated to reindeer herding.

Reindeer herding as a subsistence economy has produced economic classes with different priorities for the production and consumption of reindeer products. The acquisition of a surplus is a result of the control over the source of production (e.g., the reindeer) so that reindeer products serve both as a source of subsistence and a commodity for exchange or sale outside the local community (Koster and Chang 1994: 13). Therefore, a noncapitalist form of production continues to function alongside and in conjunction with capitalist forms of production. This economic situation applies to the reindeer herding situation among the Chukchi, Iñupiat, and Saami in the past and present.

Reindeer Herding as a Capital Endeavor

Reindeer herders have long traded surplus products for goods of non-local origin. This exchange, though rarely equitable, provided the basis for the eventual incorporation of reindeer herding into the global capitalist economic system. All of the nation-states which contain reindeer herding populations participated in the growth of the world capitalist system. As such, the inhabitants of these countries, including reindeer herders, were willingly or not involved in the emerging global market. Generally, national governments' interests and investments in reindeer herding communities was, and continues to be, tied to

developing resource extraction infrastructure. Concerns of reindeer herders typically were ignored politically.

In the former Soviet Union, this was especially the case, where large scale investment largely benefited a politically elite core at the expense of local environmental conditions. Often, local reindeer herding groups would be treated and developed as support structures for industrial concerns, and herders and their families relegated to an inferior socioeconomic status. Often, even this inequitable relationship is abandoned when the desired resource is exhausted, rendering traditional economies isolated from both the core and the industrialized periphery (Schindler 1990: 160-161). This condition was seen to prevail in Chukotka during 1998 and continues to the present.

In recent times, this situation has been increasingly averted in Finnmark and other Fennoscandian Saami areas, as is best illustrated by the assertion of Saami customary rights and the successful blocking of the construction of the Alta-Kautekeino hydroelectric dam project in Norway in the 1980's (cf. Paine 1983). Furthermore, Saami participation in regional trade has been active for many centuries. That trade, of course, is based primarily in the marketing of reindeer products, and reindeer herding in Fennoscandia is legally limited to the Saami, forming an ethnic-based, reindeer-oriented monopoly. Even so, the profits generated are small when compared to the potential profits of heavy extractive exploitation (Beach 2000: 244).

Such extractive exploitation is currently in place near the Iñupiaq village of Kivalina, Alaska. Here, the Red Dog zinc, lead, and silver

mine, the world's largest producer of zinc, employs many former reindeer herders from the Seward Peninsula, especially from the Kotzebue Sound region. The land is leased from the Northwest Arctic Native Association (NANA), a native corporation formed as a part of the Alaska Native Claims Settlement Act (ANCSA) of 1971. Among other things, ANCSA granted land rights and reindeer-ownership rights to Alaska natives. This has allowed the entrance into the reindeer market of formalized native corporations, associations, and cooperatives (NANA, Kawerak, Maniilaq). While reindeer herding was introduced into Alaska as an alternative source of meat to the dwindling caribou herds, the caribou have recovered and returned en masse to the Seward Peninsula (Finstad 2001: 12).

This fluctuation led to an almost exclusive focus on reindeer antler-velvet production for Asian markets as a commodity (Beach 1990: 280); most meat production was locally consumed or traded. This antler velvet market emerged in the early 1960's in Korea and has resulted in a huge influx of cash into the local economy of the Seward Peninsula (Simon 1998: 263). The cash, and the annual arrival of antler-velvet buyers, has encouraged the mechanization of herding techniques (cf., below, Technology & Mechanization). Global market slumps have led to a significant decrease in the production of antler velvet, however, and velvet production has also decreased.

In general, reindeer pastoralists are actively involved in market exchange of commodities. Some researchers have suggested that pastoralists were the original capitalists based on their reliance on the

increase of herd size and their entrepreneurial qualities (Paine 1971: 157-172). Specifically, Robert Paine suggests (1971: 169-170) that the values of reindeer herders are expressed "...in production, in capital, in aggrandizement..." and that what seems to be habitual generosity among hunters is matched by what seems to be habitual parsimony among pastoralists. Minimally, then, reindeer pastoralism is amenable to market economics.

Alternatively, Tim Ingold cautions against the economic-functional analogy of pastoralism with capitalism (1980: 230-233). Ingold points out that the pastoralist sells animals on the market only to purchase essential raw materials for domestic consumption, not to invest in factors of production (1980: 231). Pastoralists sell their products to obtain a target income to meet domestic needs, and so production is oriented towards livelihood. In contrast, ranchers are oriented towards profit-making. Furthermore, though economic rank does emerge among reindeer herders, the social relationship between those who possess herds and those who provide labor to enable access to the products of reindeer herding is temporary. Herding assistants acquire reindeer from the herder over time from which a separate herd is constituted (Ingold 1980: 234).

Nevertheless, contemporary reindeer herders worldwide depend on access to regional and global markets to sell their surplus products. This requires among the Chukchi, Iñupiat, and Saami (and most other reindeer herding populations) the combination of subsistence and capitalist economic behaviors within the pastoral mode of production.

The next section will consider in detail the various resource-oriented bases for the production of reindeer products for subsistence and commoditization, and will be followed by a critical presentation of local variations and manifestations of pastoral reindeer economies among the Chukchi, Iñupiat, and Saami.

ACCESS TO RESOURCES AND RESOURCE ISSUES

Fundamental to the successful operation of a reindeer herd, whether for subsistence or as a private enterprise, is herd maximization. While this is in part depend on political and ecological factors, it also depends on economic conditions at the local and regional levels. Locally, herd management regimes influence the availability of primary resources necessary for the production of reindeer and reindeer products. Necessary considerations include labor access, reproduction of herding knowledge, and management aspects including intensity of production and extensive and intensive herd management techniques.

Resource issues include animal production, variable production costs including animal handling, slaughterings, and cost of mechanical equipment and maintenance (taking in the common usage of snowmobiles in Alaska and Fennoscandia, their occasional use in Russia, and the variable use of aircraft, including small planes and helicopters, for spotting and herding requirements). In Russia the widespread use of the *vezdekhod*, a large, tracked, all-terrain vehicle also adds to these variable costs. Fixed costs primarily include maintenance

of corrals and cabins. Other considerations, essentially ecological in nature, are the yearly calf crop, forage constraints imposed by the environment or social factors (political or cultural constraints). These will be discussed in detail in later chapters. However, it should be noted that the quality of spring and summer forage, in particular, is a primary factor in determining reproductive success and growth rates of reindeer (Reimers 1972: 612-619).

In essence, then, the owner or operator of a reindeer herd must decide how various investments should be combined in production. This production includes the generation of intermediate products, primarily new calves and infrastructural support such as corrals and utility cabins, and final products, such as meat and antler velvet, and in some cases (mostly Saami), milk products. Limitations to production are comprised of strategic management decisions by the owner, governmental restrictions, ecology, and reindeer biology.

Issues of Production

Arctic pastoral economies relied traditionally on the domestic reindeer for their sole means of mobility and survival (Krupnik 1993: 103). For contemporary reindeer herders there is the option in most cases of working in other industries of the regional and national economies. In Russia, this has been limited during the last decade by economic collapse in some regions, including Chukotka and the Kola Peninsula. Nevertheless, alternatives to reindeer herding as the basis of

survival continue in the form of opportunities provided by wage labor. On the Chukotskii and Seward Peninsulas, as among many other reindeer herding populations, subsistence hunting and fishing provide economic opportunities apart from reindeer herding, and in some areas, such as on the Seward Peninsula, subsistence hunting and fishing predominates.

Perhaps the most important modern aspect of production in reindeer herding is that of rationalization. This principle consists of two aspects which will be referred to as 'state rationalization' and 'local rationalization.' State rationalization is the attempt of governing authorities to augment programs of production from the managerial and bureaucratic level down to the herders and their techniques of management and production. This includes the ideological issues of social equality and economic development (Paine 1994: 157), which will be discussed in the following chapter.

Local rationalization, by contrast, is the management of production resources to enable maximum economic gain per unit (i.e., per animal). Local rationalization is implemented by the herders directly, based on tradition and experience. The goal of economic maximization is, however, tied to considerations of grazing, which seems to encourage a system of calf slaughter. During the first spring after their birth, calves are extremely vulnerable, and so it is most rational to slaughter them before their first year (Beach 1990: 287).

Maximization ties issues of rationalization to both economy and ecology. Ideally, the optimum herd composition is one that supports a

predominantly female herd with healthy offspring and the maintenance of bulls in sufficient numbers to impregnate the females. The goal is to have the largest herd possible within the limits of winter-grazing capacity (Beach 1990: 287). An intimate knowledge, then, of both individual animals and pasture capacity is necessary for maximum production. Of course, the use of artificial fodder can raise the meat production capacity considerably beyond the natural winter-grazing capacity.

Pastures and Land Tenure

Among Arctic reindeer herders of earlier periods, the basic functional unit of land use was usually the community. Land was by tradition used by a community, often exclusively, and access to this land was usually based on co-residence and herding cooperation, or sometimes on individual households (Krupnik 1993: 93). Land ownership among reindeer herders, specifically, was traditionally limited to usage rights, though experiences with capitalist (market-oriented) and socialist (collective) systems of land tenure have drastically redefined concepts of land tenure. In general, under conditions of pastoralism, divided access to animals is maintained with common access to land. In instances where reindeer pastoralism has given way to reindeer ranching, divided access to both animals and land prevails with an orientation towards production of reindeer commodities for exchange and consumption through a capitalist market. While it can be claimed that herders from each of the case studies are moving towards conditions of

ranching, none have fully realized such an economic situation, whether or not desired. Different regimes of land tenure and access to pastures have arisen within each of the case studies.

In Norway, land is formally held by the Crown. This, coupled with the generally dismal record of Saami-Norwegian interaction, has led to conflict and confusion over land access and rights in Finnmark. Through the oversight of the Reindeer Administration, demands are placed on Saami herders who make use of Crown lands (Paine 1994: 170-171). In 1996, the Ministry of Agriculture finally clearly delineated the rights of reindeer herders. These rights do not rest upon the law alone, but have their foundation in age-old use. However, the State Forest Administration, which manages lands in Finnmark, acts in such a way as to force the herders to yield to developmental expansion. In 1997 the Saami Rights Commission determined that herders have age-old usage rights that should be protected from expropriation (Bull 1999: 124).

Land and water rights remain unresolved with a continuing political debate in Finnmark. The Saami Parliament is attempting to secure the same usufruct rights as those held by Norwegians in southern Norway, which would put amend to land discrimination. Saami reindeer herders currently possess only weak protections against encroachment by non-reindeer herding land owners, and no compensation is required if damage cannot be regarded as considerable. This goes against ordinary principles of Norwegian Law and the fundamental human right to receive compensation for the expropriation of property for public use (Oskal 1999: 45). In fact, the Saami Parliament (of Norway) has claimed legal

protection for securing the existing customary rights and land use rights. Additionally, the Saami Assembly has demanded participatory and inclusionary models for management of these rights as a part of the rights of political self-determination within the nation-state (Oskal 1999: 49). These developments contrast sharply with the experience of reindeer herders in Russia.

Influenced by the United States's system of Indian reservations and administrative agents, early Soviet policy allowed Native life and land to be governed by traditional law (Slezkine 1994: 149). Early documents of the Committee of the North, a federal assistance institution for northern peoples, attempted to dispel the notion that northern reindeer herders simply wandered into a land from another, with no direct affiliation with a territory (D. Anderson 2000: 150). In 1992, the Russian Federation passed the resolution "On the Regulation of the Use of Land Parcels, held as Ancestral, Communal and Family Tracts by Numerically Small Peoples of the North." This resolution states an intention to foster the development of economic independence, including the provision that any development of subsurface deposits must include some payment to numerically small peoples with ancestral claims to that land, though this has not been enforced (Pika 1999: 186-187).

The eventual establishment of collective farms (*kolkhozy*) and state farms (*sovkhozy*) in the Soviet era set the precedent for defining grazing territories for reindeer herds in the post-Soviet era. In Chukotskii Raion, in Chukotka, grazing lands correspond to older state farm boundaries, and are maintained exclusively. While association with a brigade

continues to form the basis of the definition of access to particular grazing lands, the farm at Lorino in Chukotskii Raion remained essentially collective in nature. The continuing stability of the Lorino farm[9] in its current condition is questionable, and any reorganization of the farm would lead to changes in land tenure, especially if brigades were fully to privatize their herds.

Caroline Humphrey (2002) has suggested that the families, rather than the farm or individual, will ultimately determine regimes of land tenure based on their position as the main unit of production in the Russian North (e.g., the domestic mode of production). These family units are envisioned as households encouraged into greater productivity by a collection of reciprocity ties with the leadership (Humphrey 2002: 167, 174). This process is occurring in the form of *obshchiny*[10], a community-collective form of organization re-emerging in rural Russia. The operation of farms and the transmission of land will likely continue to be significantly regulated by government authorities. This nominally occurred with the 1999 Federal Law "On Guarantees of the Rights of the Small Indigenous Peoples of the Russian Federation" which ostensibly assures the right to occupancy of ancestral lands to Native peoples, though little real change has occurred (Konstantinov 2002: 16-17).

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[9]The official name of this farm is "*Kollectivnoe Sel'sko-khoziaistvennoe Predpriatie (KSP) 'Lorinskoe'*" [Collective Village Enterprise'Lorino'].

[10]*Obshchina* is essentially the local community, which in the post-Soviet period is sometimes used as the level of economic and political organization, notably in rural areas, and almost exclusively among reindeer herders.

In Alaska, Native ownership and usage of lands is regulated under the Alaska Native Land Claims Settlement Act (1971). This includes some of the lands used by Alaskan reindeer herders. Most fundamentally, this Act, known as ANCSA, attempted to define the right of the United States federal government to profits in Alaska's oil industry. To do this, questions of Native ownership and access to traditional land and resources had to be resolved. This led to the transfer of forty million acres of federally controlled land to Native ownership: twenty-two million acres were allocated to over 200 villages, sixteen million acres were transferred to the newly created 'regional corporations,' and two million acres were set aside for urban-dwellers, individuals, historic monuments, and cemeteries. Village land claims, however, amounted to more than 329 million acres, and of the sixteen million acres granted to the villages, subsurface rights over all was granted to the regional corporations (Pika 1999: 48).

The enactment of ANCSA guaranteed Alaskan Natives' access to some traditional lands, but also tied many to economic systems with which many were unfamiliar. It does, however, allow for the indigenous management of reindeer herding in the Seward Peninsula through the native corporation "Kawerak" (see Chapter 4 above for information on Kawerak). The access to reindeer grazing lands in Alaska is based in part on rights granted through ANCSA and in part through agreements between Kawerak, Inc. and governmental authorities, who regulate access to state and federal lands through the use of grazing permits (Simon 1998: 294). These federal regulatory agencies, known as the

Bureau of Land Management (BLM) and the National Park Service (NPS), issue grazing permits to herders who apply for and receive land use permits from land owners to allow their reindeer to graze on public and private land. On the Seward Peninsula, each reindeer owner has a permit-area, within which the reindeer are kept. The annual migrations of the herds are also kept within each permit area (Jernsletten and Klokov 2002: 76).

Reindeer herding in Alaska used to be legally limited to Alaska Natives, based on the Reindeer Act of 1937. However, on May 18, 1998 the 9th Circuit Court ruling that Alaska Native reindeer herding is not traditional, and therefore should not be limited to Alaska Natives, was upheld by the Supreme Court. According to James Simon's 1998 dissertation, however, reindeer herding is a traditional Iñupiaq activity now, which deserves legislative protections (Simon 1998: 311).

The relationship of reindeer herders to the land differs among the case studies due to various policy programs enacted by the governments of the nation-states in which the reindeer herders live. Fundamentally, the irreducible unit of production is the domestic household, though the relation of the individual to the land is determined by the affiliation of the household with a larger community: a 'brigade,' farm, or *obshchina* among the Saami of the Kola Peninsula and the Chukchi of the Chukchi Peninsula, a *siida* among the Saami of Finnmark, and a village among the Iñupiat of Alaska's Seward Peninsula. These collective forms share many similarities, each being essentially an association of households.

Ownership of Reindeer

At the current time a variety of forms of ownership are practiced by reindeer herders in the circumpolar North. Traditionally (i.e., before collectivization) reindeer among most Eurasian herders were owned as private property by the household (Krupnik 1993: 90). This tradition of private ownership continued into the Soviet period. During this period, Chukotka maintained 5% private ownership of reindeer, and some state-owned deer are still considered to be 'personal' or even 'private' since herders have usage rights to them.

In Russia among both the Saami and Chukchi, reindeer were the possession of the state until the end of the Soviet Union. Now, individual reindeer and herds among the Saami and Chukchi can be owned privately, though ownership through a collective enterprise, wherein reindeer herders collectively manage and own a large herd divided into brigades, is the more common form. David Anderson reports (2000) that among the Evenk, though herds are divided into brigades, small parts of the herd are perceived to be owned by senior women, and individual deer were regarded as for the exclusive use of certain herders (D. Anderson 2000: 32). This was not personally observed among the Chukchi of KSP 'Lorino.'

In contrast, reindeer ownership among the Saami of Fennoscandia continues to be private, a situation that does not support a move towards large, market-oriented reindeer ranching of reindeer (cf., Management of Reindeer in Chapter 4 above). Nevertheless, reindeer

ranching seems to offer the best economic return (Beach 1990: 296). Currently, reindeer among the Saami of Finnmark are owned as a herd of a particular size, which must be reported to tax authorities and the Reindeer Administration. Concern from the state over ownership, then, is based on taxable capital wealth, which is determined by eighty percent of estimated herd size. This does not take into account the number of reindeer slaughtered for income, but considers only the ownership of reindeer as ownership of capital (Paine 1994: 113). As well, women and children have traditionally held a strong legal position in Saami society, and spouses keep separate property and estates (including reindeer with separate ear-markings) with fully independent disposability (Nikolaisen 1999: 90).

Among the Iñupiat of Alaska's Seward Peninsula of today, reindeer are owned by individual families. Private reindeer herding was the original condition on the Seward Peninsula before the shift to collective herding, a period which lasted from the mid-1920's to the early 1940's. In 1937, the Alaska Reindeer Service requested that it be permitted to purchase all non-Native owned reindeer. This was a response to increasing tensions between White and Native herders. Later the same year, the Alaska Reindeer Act was passed during the Great Depression in part due to the lobbying efforts of the cattle industry which argued that reindeer production was intended for Native use only. Congress agreed, and by 1940 all non-Native owned reindeer had been transferred to the government (Simon 1998: 242-243)

By 1948, Alaska's reindeer industry was in collapse, largely due to attrition from wolves and caribou (wild reindeer). Collective, open herding was abandoned for reprivatization, establishing a system of family-oriented reindeer ownership that persists to the present day. Government regulations, however, limit the number of reindeer in each herd, ostensibly to prevent overgrazing. This has the economic effect of limiting wealth, since the capital basis of production, the population of reindeer themselves, is regulated (Simon 1998: 294-295). Maximizing herd size, therefore, is unnecessary since excess animals must be eliminated.

Labor

In reindeer herding the recruitment of labor is of primary importance, since without assistance a herder cannot accumulate and manage enough animals to constitute a herd. Once a herd is established, however, labor requirements increase at a much slower rate than does the herd's growth. Tim Ingold explains (1980: 180) that it requires no more labor to manage two thousand reindeer than two hundred. This is so in part because of the bonding between the animals themselves, which increases herd stability. Besides labor requirements of herd-tending, labor requirements increase as the threats to a herd increase. Again, though, a larger herd is more capable in defending and organizing itself.

Throughout the circumpolar North today, potential reindeer herders far outnumber available opportunities to practice the occupation. As has long been the norm among the Saami and Chukchi, herders without herds are often employed by those who have them, especially in Finnmark, where the reindeer are privately owned by the household. In Chukotka and on the Kola Peninsula, where reindeer herding enterprises still carry the legacy of the Soviet collective farm or state farm, former herders flock to the urban centers in search of employment as reindeer herds dwindle. In Alaska, by comparison, reindeer herders tend to hire laborers seasonally and locally, as specific reindeer-related tasks require.

All reindeer herding areas, however, are suffering a decline in knowledgeable herders. This is due to a decrease in interested new recruits coupled with the increasing difficulty of new recruits in obtaining skills from their parents. In Scandinavia, rational herd management techniques have led to a call for the substantial reduction of the labor force (Beach 1990: 293-294). In Alaska, where reindeer herding is a secondary economy to hunting and fishing, there is little interest in a herding occupation. Herds that have been lost to mixing with caribou or predation are only rarely reconstituted. In Russia, recruitment of new herders has been a problem since late Soviet times (Beach 1992: 124), and underemployment has long been a problem for Russian Saami since the transition from nomadism to semi-nomadism and sedentarism (Luk'ianchenko 1989: 93-94).

In the former Soviet Union, rural labor has been affected in part by the Law on Private Property (Zakon o sobstvennosti) of 1990, one of a series of land reforms. Ultimately resulting in the reorganization of former collective and state farms (*kolkhozy* and *sovkhozy*) into private enterprises, former workers, including reindeer herders, were given shares in the privatized farms based on work history and employment in the enterprise (Konstantinov 2002: 4). According to Konstantinov, there is a tendency on the Kola Peninsula to maintain an ongoing reinterpretation of the *sovkhoz* as a focus of labor organization rather than to revive a pre-Soviet antecedent. However, with inflation and non-payment of salaries, severe deterioration has occurred in the condition of reindeer herders and their families over the last decade. Indeed, as early as 1991, Hugh Beach reports that salary increases would not compensate for inflation (1992: 132-124).

Similar tendencies were observed during fieldwork in Chukotskii Raion in 1998. This phenomenon, rooted in memories of adequate employment and paid salaries under socialism, is an attempt in part to return to Soviet-era economic organizations. Caroline Humphrey describes this as "a rather predictable propensity 'to turn back,' or at least a resolute refusal to abandon values and expectations associated with socialism" (2002: 13). In Chukotka, economic degradation and collapse is prevalent, and many former *sovkhoz* workers cannot even find work outside reindeer herding, given that unemployment in 1998 exceeded seventy percent in some villages and towns.

Technology and Mechanization

The mechanization of reindeer herding has significantly changed the nature of reindeer herding itself. Though mechanization has offered benefits, such as ease of mobility and transport, it has also led to a profound shift in the training of reindeer herders and the structure of reindeer herds. Now, herders must be mechanics as well as occasional wage laborers in order to maintain mechanical equipment, particularly snowmobiles. Mechanization also has witnessed the use of helicopters and light airplanes to assist in herding, as well as the use of tracked and wheeled all-terrain vehicles used for transport. Use and maintenance of this equipment requires education and labor and economically binds the herder to the consumer economy.

Generally, school-trained herders lack the practical experience of their parents and rely more heavily on mechanical equipment. While this compensates for the loss of practical herding knowledge, other problems do arise. Overuse of mechanical equipment encourages further loosening of control over the reindeer and an increase in time in separation between the herder and the reindeer. Furthermore, increased operating costs accompany mechanization, requiring more of the herder's time to pursue other sources of cash (Beach 1990: 294).

The consequences of the mechanization of reindeer herding are similar throughout the circumpolar North. While the process of mechanization occurred at different times in different places, it everywhere enabled the maintenance of larger herds with fewer herders.

Pertti Pelto (1973: 137-138) summarized the consequences of mechanization among the Skolt Saami of Finland in the 1960s and early 1970s, revealing a pattern of changes that would occur later across reindeer herding populations. The cash cost of effective participation in reindeer herding prevents some families from taking part even partially. This, coupled with associated financial mismanagement, largely due to unfamiliarity with a complex cash economy, led to the entire demise of reindeer herding in the Seward Peninsula village of Golovin, Alaska, in the 1960s.

Pelto delineates potentially further negative consequences of mechanized reindeer herding by arguing that role requirements can shift to favor young over old herders. Furthermore, the almost total loss of individual and family control over herds has diminished the incentives for small owners to continue herding, especially considering the marked increase in dependence on cash and debt. This leads directly to an increase in the economic disparity among the herders themselves. Though economic differentiation existed well before mechanization, consequential differences include the possibility of one's demise as a herder. Among the Saami herders in Kautokeino, Finnmark, two-thirds of annual expenditures go to mechanized transportation, with thirty-five percent of that amount allocated to snowmobiles (Paine 1994: 145). The investment required to maintain mechanized transport is prominent today among Chukchi and other reindeer herders in the former Soviet Union as evidenced by their widespread inoperability.

Overmechanization can lead to a greatly reduced level of tameness in reindeer given the modern tendencies to scare rather than coax a herd into a corral. Hugh Beach reports (1981: 373) that a herd that has been habitually frightened by helicopters will become frenzied and eventually uncontrollable by any but mechanized means. Even reindeer habitually trucked from one grazing area to another eventually forget how to travel between them. Additionally, reindeer frightened habitually are eventually desensitized to the noise of an engine, thereby becoming harder to handle and requiring a further increase in mechanization (Beach 1981: 437).

This situation has led some to suggest the demechanization of reindeer herding. Demechanization, maintains Pelto (1973: 187), could be achieved in part through the construction of fences to isolate certain herds to pastures. This could reestablish at least partial family control over herds, which is the point of production in most reindeer herding economies. Furthermore, a reduction in the stresses of mechanization would result in healthier animals in terms of weight and viable calves. This would require a return to some degree of intensification of herding, particularly in the winter, when the herd is moving between pastures, and for corralling. This process would also result in the increase in knowledge through human-reindeer interactions on a more equitable, 'negotiable' level.

Pelto notes, however, that a retreat from mechanization is not necessarily viewed by the Skolt Lapps (Saami) as the most desirable situation due to benefits gained from mechanized transport. James

Simon notes (1998: 260-261) that on the Seward Peninsula, snowmobiles enable a more sedentary lifestyle and provide a means for transporting children to school from the tundra. As well, labor requirements have been reduced due to mechanization, resulting in the lessening of time required to travel to and from the herd, but also resulting in a reduction of available herding jobs. Considering the general labor shortage in reindeer herding enterprises, however, potential problems of underemployment caused by mechanization seem currently to be offset. Whether under favorable or stressful employment conditions, mechanization inevitably leads to a decrease in the reproduction of traditional reindeer herding knowledge. The extended presence of mechanized equipment among reindeer herders, however, involves the learning and transmission of a new set of skills necessary to maintain equipment, on the one hand, and successfully herd reindeer on the other.

Reproduction of Herding Knowledge

The nature of reindeer herding knowledge, as with any body of lore, requires an ever-changing regime of skills and attitudes. Though this may be the case, mechanization and involvement in capital markets have nevertheless more rapidly than ever before transformed the traditional domain of knowledge required for reindeer herding, In some areas, particularly in Russia, adverse economic conditions have limited access to mechanical equipment and consequentially lessened dependency on

the cash economy, fostering a revival of skills abandoned in the wake of Soviet era mechanization.

Still, changes in skills necessary for successful reindeer herding have occurred. Pertti Pelto summarized this shift among the Skolt Saami as the "snowmobile revolution" (1973: 139), and it has affected reindeer herders throughout the circumpolar North. Some of the reindeer herding skills identified by Pelto to be negatively affected by mechanization include the effective use of draught deer, management of cows and calves during spring calving, the training and managing herd dogs, the recognition of individual reindeer and lassoing them in open country, and the controlled transporting of small herds of reindeer. Notably, this also includes all-day skiing in pursuit of reindeer and camping and living in the forest and tundra.

With mechanization comes the need for a new set of skills now equally critical for successful, competitive reindeer herding. These skills replace in part or full those identified above, and include maneuvering snow vehicles on rough terrain, and skills and resources (including money) for maintaining effective operation of motor vehicles. As well, shrewd judgment must be made about the selling of animals as they appear almost randomly in the various roundups. Endurance and mobility are required for attendance and participation on relatively short notice in different roundups at various locations throughout the year. These shifts do not necessitate the abandonment of old skills, but the latter are largely rendered unnecessary for modern mechanistic extensive herding (Pelto 1973: 139).

Usually, knowledge is passed from elder to younger members of the herding family. Individuals from outside the family are at times taken on as trainees or apprentices to learn techniques and acquire initial breeding stock. Besides knowledge of the methods of reindeer herding, an intimate knowledge of the land, its pastures, waters, passes, and the migratory routes of the herd needs to be obtained. This requirement is increasingly less prevalent under conditions of mechanization. The relationship of the reindeer pastoralist to the land, however, is best understood through the category of 'knowing,' which is not codified but is demonstrated through example (D. Anderson 2000: 117). Therefore, much knowledge is transferred through example and acquisition of experience through mimicry.

Finally, in contemporary reindeer herding, and throughout the circumpolar North with the demise of the Soviet Union, the knowledge of how to market reindeer products becomes critical. If production is oriented beyond subsistence consumption, then surplus must be distributed and sold at a profit. If a profit cannot be obtained, then little incentive exists to maintain exaggerated levels of production, as occurred especially in Soviet Russia. This market knowledge requires an understanding of at least local infrastructure, regulation, and money market regimes. For reindeer herding enterprises oriented towards production for the market, this can require formal training.

REINDEER AS PRODUCTIVE CAPITAL

While the distribution and consumption, as with production, of reindeer products is in part determined by ecological and geographic considerations, economic organization from the local level up also plays an important role in determining product use. Ruth Bunzel succinctly summarized this role of local economic organization:

> The problem of distribution is twofold: distribution in time, and distribution among the different members of the group... In most cases leisure is not dependent upon the abundance of nature but upon economic planning... (Bunzel 1938: 377)

So economic planning at the local level is a social form, ultimately based in kinship, distributing local production locally for local consumption. This seems to be applicable to all four case studies, even when there is a strong orientation to send reindeer products to market. Bunzel also explains how this kin-based, culturally determined pattern of distribution applies to economic endeavors beyond the local group:

> Any joint enterprise requires some formal distribution of the product among those who take part. But distribution does not always bear the obvious and direct correlation to production that we might expect. There may be some arbitrary [cultural] division... [Distribution] serves indeed to minimize the effects of striking inequalities in skill, like insurance, it distributes risks. (Bunzel 1938: 377)

What is ultimately distributed is not the product, but rather economic risk. Therefore, the relation between production and distribution processes are not always direct. Institutional arrangements organize economic processes, including the marketing of reindeer products for consumption, beyond the local group.

Commodity and its Application to Reindeer Products

Any investigation of economy must include a consideration of the concept of commodity. Defined as objects of economic value, commodities act as the 'vehicle' of exchange value, and possess a social life of their own (Appadurai 1986: 3). In a sense, the commodity is a carrier of the labor invested to acquire the product, which ideally is in excess of subsistence needs. Since the link between exchange and value is socioculturally constituted, the exchange value of an item is an ideological and sociocultural construct. Commodities may be best understood as a consequence of social interaction rather than as a manifestation of the form or function of exchange. With the basis of the value of a commodity being the labor invested, the social link of trade potentially adds inherent value to the commodity.

A more conventional view of commodity is expressed by both Marxists and neo-classical economists. According to a Marxist interpretation, a commodity is a product intended principally for exchange, with the product emerging in the institutional, psychological, and economic conditions of capitalism. This concept of commodity as

central to an economic system of exchange has been largely replaced by the neo-classical perception in which 'commodity' is equated with 'goods.' Furthermore, in neo-classical economics, the concept 'commodity' refers only to a sub-class of primary goods, and is not used as a central analytical concept. Generally, then, economic analyses have interpreted 'commodity' as a type of manufactured good or service specific to capitalist economic systems. Therefore, since commodities are socially defined, commodities can become, or create, capital (Appadurai 1986: 5. 57).

The produce of reindeer, including meat, antlers, and furs, can be treated as a commodity according to Marxist interpretations when such production is intended for exchange. This usually includes surplus meat and fur, though antler is primarily produced for outside markets. As such, antler production provides a primary trade commodity to reindeer herders. More broadly, however, all aspects of reindeer products, including the reindeer themselves, can be classified as commodities. Reindeer are simultaneously capital and generators of capital, especially in market-based economies, and more so now since the demise of the Soviet Union.

Reindeer Products

Reindeer supply an array of products for subsistence and market consumption, but in the marketplace, meat and antler-velvet form the primary products of trade. In Fennoscandia, there is some trade in milk

products occurs. Marketing of reindeer products throughout the reindeer herding regions of the world generally is limited to those products not consumed through subsistence. One product not usually marketed is the skins and fur (or pelage) of *Rangifer tarandus* due to the tendency for reindeer herders to make widespread use of it as material for tents, clothing, and other domestic needs. Its cultural role and significance, while varying between reindeer herding cultures, is universally received as a renewable reindeer-resource.

These renewable resources in all regions are utilized in the creation of art and handicraft (*duodji*), which in turn serve as symbols of identity. In fact Amber Lincoln points out (2001:22) that among the Saami, handicraft is one of the main expressions of Saami culture. The dominant motif in these handicrafts is the reindeer from which many of a handicraft's constituent parts are drawn. However, if the reindeer is the dominant motif, reindeer *herding* constitutes the "key symbol" for the Saami people (Lincoln 2001:23).

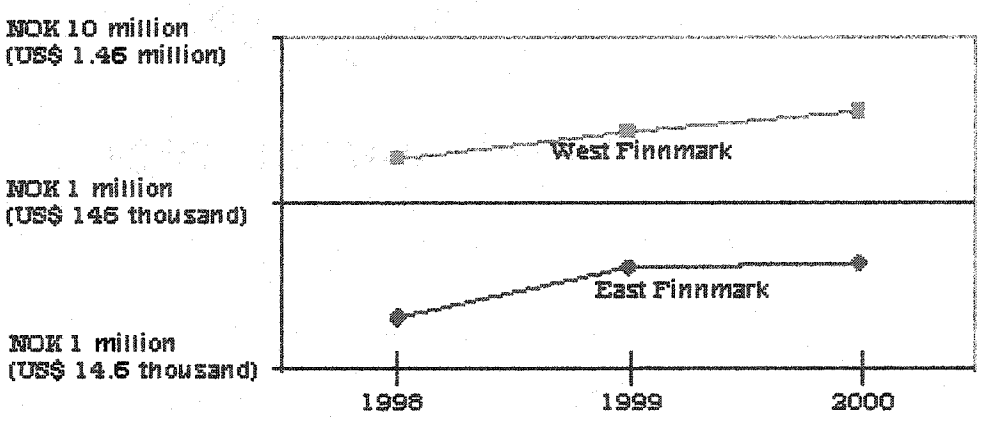

Figure 9. Income from Handicrafts (*Duodji*) in Finnmark by Region in U.S. Dollars (adapted from Jernsletten and Klokov 2002: 93).

Lincoln explains that these handicrafts, like meat or antler-velvet, constitute a market, ranging from 'fine art' to 'tourist art' (Lincoln 2001: 5). There are similar markets among the Chukchi and Iñupiat as well.

The antler market, by comparison, operates quite differently. Almost all antler-velvet produced for consumption, however, is sold to Asian buyers who want it for its medicinal properties, including a use as an aphrodisiac. Meat, in contrast, is usually consumed locally and sold in commercial markets. In Russia, especially, the production of meat for consumption by resident non-Native industrial workers provides a stable market for some of Russia's reindeer herding peoples. On the Yamal Peninsula, growth in herd size, unlike among most contemporary herds, has occurred to supply meat to local gas-extraction industries (Baskin 2000: 23). Subsidized by this industry, the number of reindeer on the Yamal Peninsula has increased so dramatically that an overgrazing of pastures by the large herds has occurred (Baskin 2000: 27).

In most areas of Russia, however, access to markets for reindeer herders is severely limited by a lack of meat processing and transportation infrastructures. This situation is extreme in Chukotka where in 2000, the cost of production for one kilogram of meat is US$8, while the market value is only US$2.50. Baskin delineates the costs of meat production (2000: 27):

2% for salary
6% for transport
21% for corrals and field huts
61% for dead and lost animals (2/3 less during Soviet times)

Obviously, this severely limits the viability of reindeer products as a commodity in capitalist markets. Figures 10 and 11 below demonstrate the declining numbers and values of reindeer and meat in Chukotka:

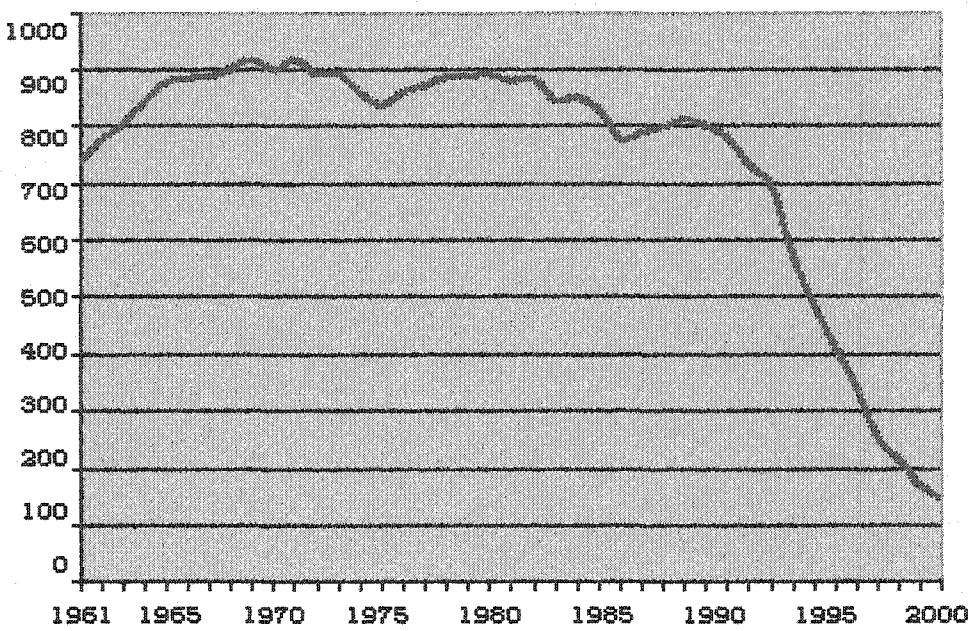

Figure 10. Dynamics of Number of Domesticated Reindeer in Chukotka, in Thousands (adapted from Jernsletten and Klokov 2002: 30).

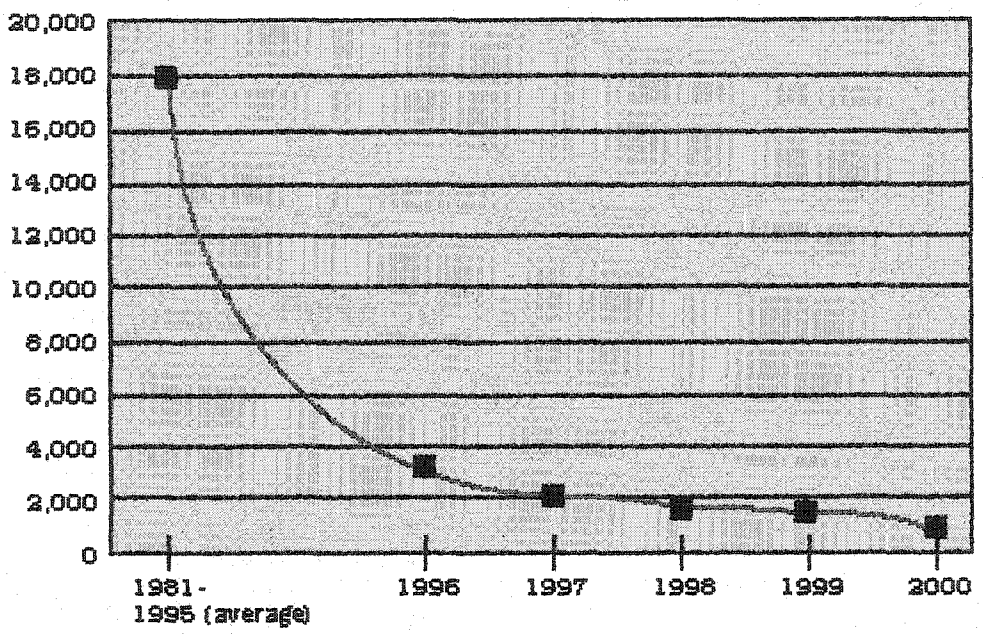

Figure 11. Volume of Meat Slaughtered (live weight) in Metric Tons in Chukotka (adapted from Jernsletten and Klokov 2002: 50)

In general, economies that are based on the utilization of common renewable resources, such as reindeer reliance on access to pastures, often experience a state of economic crisis. In Finnmark *fylke*, Norway, economic crisis has emerged not because of social disturbance or a lack of infrastructure, but because of a 400% increase in the number of reindeer between 1950-1989 who depend on common pasturage, leading to lower slaughter weights and higher reindeer mortality (Karlstad 1998: 247). This increase is largely driven by the potential for profit in capital markets, but increases in herd size were expected due to the tendency to attach value to the self-reproductive capacity of pastoral capital (Paine 1994: 195). The optimum situation, then, is to make values attached to pastoral capital and to the marketing of reindeer products mutually

supportive. Figures 12 and 13 below demonstrate the gradually declining numbers and values of reindeer and meat in Finnmark:

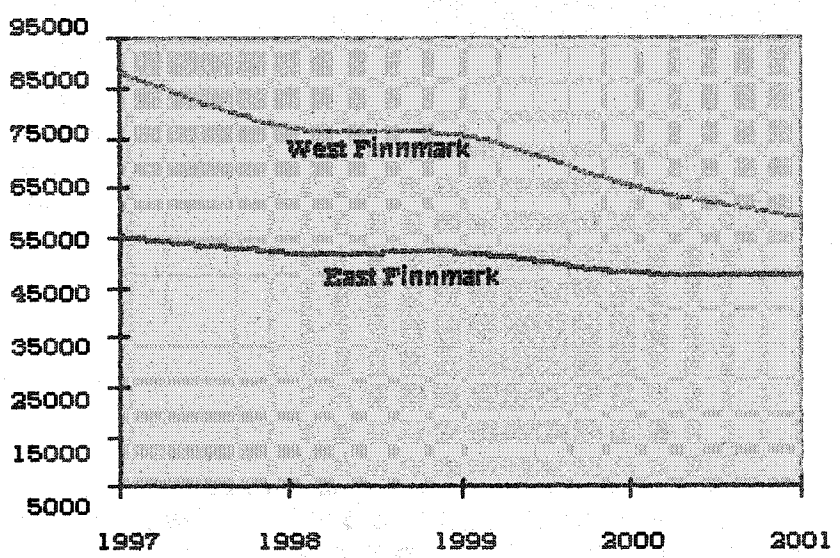

Figure 12. Number of Reindeer in Finnmark by Region (adapted from Jernsletten and Klokov 2002: 89).

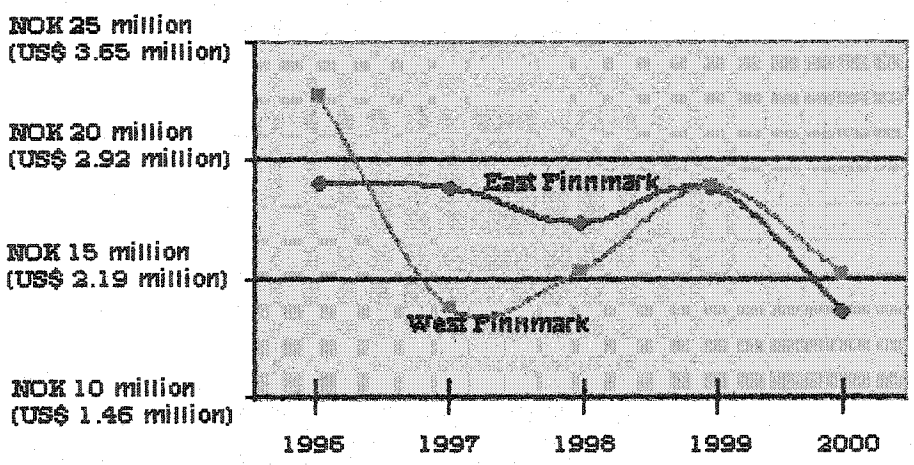

Figure 13. Value of Meat Production in Finnmark by Region (adapted from Jernsletten and Klokov 2002: 92).

On the Seward Peninsula, reindeer are managed primarily for the production of meat and antlers. Meat is also widely used to supplement subsistence diets based on fishing and sea mammal hunting. The market value of reindeer products in Alaska has fluctuated extensively in the last decade: annual reindeer meat sales have brought between US$648,000 and US$158,000 between the years 1993-2000. Similarly, antler-velvet annual income has ranged from US$772,000 to US$177,000 (Fitzgerald 2002: 4). These figures are influence by a trend affecting all of Alaska and Siberia, that is, of reindeer loss due to caribou incursions. Since 1987, over 16,000 reindeer have disappeared/departed on the Seward Peninsula, resulting in a loss of US$9 million to Alaska's reindeer industry and the complete demise of six entire herds (Fitzgerald 2002: 5). Figures 14 and 15 below demonstrate the declining numbers and values of reindeer and meat on the Seward Peninsula:

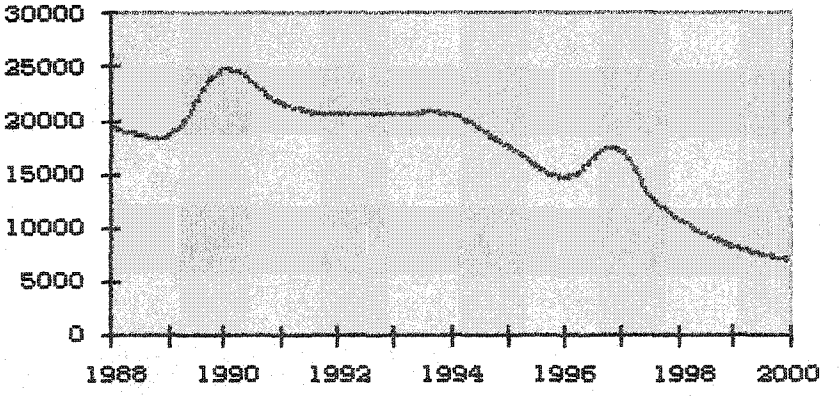

Figure 14. The Development in Total Number of Reindeer on the Seward Peninsula (adapted from Jernsletten and Klokov 2002: 77).

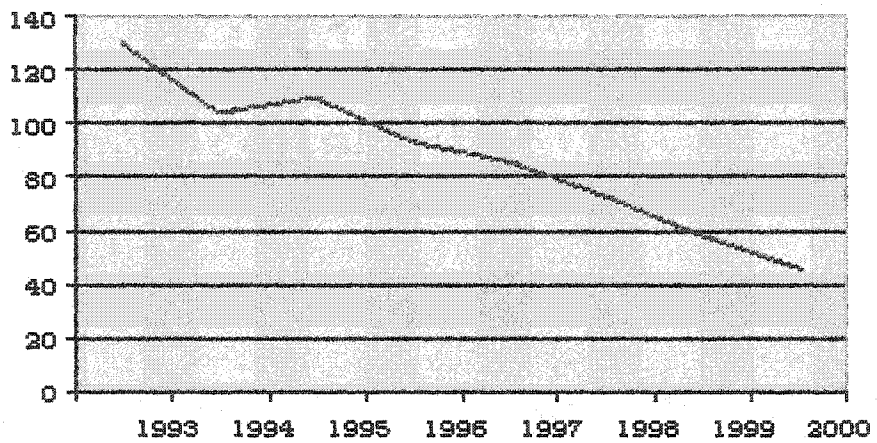

Figure 15. Production of Reindeer Meat (dried) on the Seward Peninsula in Metric Tons and US Dollars (adapted from Jernsletten and Klokov 2002: 78).

The sale of Seward Peninsula reindeer antler-velvet to the Korean market began in the early 1960s, providing an influx of cash which was used to purchase machinery such as snowmobiles and aircraft to aid in herding tasks (Simon 1998: 262). Antler-velvet production became the dominant source of income for Alaskan reindeer herders until the recent decline in the Asian antler market (as have Asian capital markets as a whole). Chukchi reindeer herders also used to sell antler-velvet (*panty*) during the Soviet period, but the absence of an adequate transportation infrastructure causes the marketing of antler-velvet to be difficult and costly. Antler-velvet was sold in the post-Soviet period in large amounts, leading to an oversupply to Asian markets and a consequent crash in prices. This led to the severe decline of antler-velvet sales in Russia and Alaska. Among the Kola Saami, participation in the antler-velvet market has ended as well (Konstantinov 2000: 57 and personal communication

2002). Figure 16 below demonstrates the declining value of antler, blood, and fur production on the Seward Peninsula:

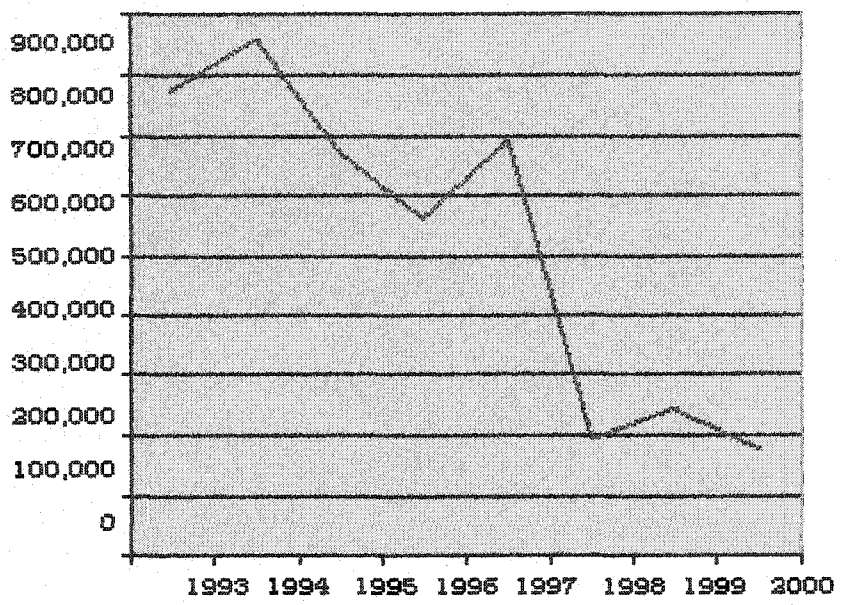

Figure 16. Value of Antlers, Fur, and Blood Products on the Seward Peninsula in U.S. Dollars (adapted from Jernsletten and Klokov 2002: 77).

The marketing of reindeer products, then, is tied not only to large-scale market fluctuations, but also to culturally specific production and consumption traditions of reindeer products. Access to transportation and commercial infrastructures (distribution), remains vital to the successful marketing of reindeer products. In Alaska and Chukotka, infrastructural development is minimal, and that which does exist in Chukotka is deteriorating and undependable. In Finnmark, especially, and on the Kola Peninsula, necessary transportation infrastructure is present, greatly facilitating the distribution and marketing of reindeer

products. On the Kola Peninsula the potential for developing markets is great, though the stringent meat processing guidelines of the European Union pose a barrier to Kola Peninsula reindeer meat. Currently, a Swedish enterprise has been established on the Kola Peninsula and is processing meat according to European Union standards, providing an additional, if small, market for Kola Peninsula herders.

The Case of the Collective Farm Enterprise 'Lorino'

To better demonstrate the threat of rapid economic change to a market-oriented reindeer herding enterprise, the reindeer herding farm enterprise of Lorino will be used as a case example. The Collective Farm Enterprise 'Lorino' will be utilized to demonstrate the consequences of current economic trends affecting the viability of reindeer herding in Chukotka as a capital-based market enterprise. Most of the following information was collected in Chukotka in 1998 as part of a National Science Foundation pilot project.

The Lorino state farm was reorganized (25 July, 1994) into a collective village-farm enterprise (Kollektivnoe Sel'skokhoziaistvennoe (Selkhoz) Predpriatie 'Lorinskoe'). This organizational structure was one of three basic forms allowed by the restructuring laws, and while the Lorino farm maintains its collective organization, it is also officially organized as a joint-stock company, though the enterprise is operationally non-existent, as shares have little real value. Prior to this reorganization, the Lorino farm inherited from its predecessor a large herd from the previous *kolkhoz*, *Imeni Lenina*, reflected by an increase in

meat production of almost 100% (1993: 9,000 head; 1994: 17,200 head) (*Otdel' Statistiki* 1991-1998: *Chukotskii Raion, Lavrentiia*).

This dramatic increase in meat production appears to have resulted in the necessity to reduce the herd's numbers to allow for sustainable grazing at a time of rapidly failing government subsidies and assistance that accompanied reorganization. By the following year (1995), six months after reorganization, this number had plummeted to 5,900 head of deer, and this in turn was followed by a dramatic decrease to 2,600 head of deer over the next two years (*Otdel' Statistiki* 1991-1998: *Chukotskii Raion, Lavrentiia*), indicating herd stability still had not been achieved. These figures represent a drastic decrease in both absolute number of deer and number of deer available for slaughter (i.e., meat production).

In addition to these structural conditions leading to herd size reduction, a natural climatological event known as "icing" occurred with increased frequency. Icing occurs when uncharacteristically warm temperatures in the colder months lead to the melting and refreezing of snow and ice on the surface of the tundra, preventing access to vegetation by reindeer. During the difficult icings of 1996-97, 3,800 deer of 18,300 died of exposure or starvation, while 8,900 deer were slaughtered for meat to prevent starvation and exposure (*Otdel' Statistiki* 1991-1998: Chukotskii *Raion, Lavrentiia*). This severe period resulted in a 1998 head-count of 5,600 deer in four brigades.

These decreases correspond to a number of other events, which, together with icings, led to further economic hardships in Lorino. Social

services were expropriated from the collective farm by the regional government at the time of reorganization. It must be noted that in Soviet times, most social services were supplied by the *sovkhoz* and *kolkhoz*. This aspect of political power and social influence was removed from the jurisdiction of the *sovkhoz* and *kolkhoz* and placed in the jurisdiction of the administration (i.e., the government), and *sovkhozy* and *kolkhozy* were forced to privatize and reorganize. Considering the expropriation of the infrastructure of social services, the option of supplying such services privately or through government mandate and with government subsidies was never attempted. The expropriation of these institutionalized services (including libraries, education, cafeterias, cultural centers, energy production, water treatment, medical services, local postal needs, and others) with little or no compensation from the government further limits the viability of the 'privatized' sovkhoz in a severely unbalanced and ill-equipped market.

The gradual termination of these social services by the administration was justified by a supposed absence of funds and resources to maintain them. A realignment of government-sanctioned economic priorities from quantity of production to profit acquisition followed. This was accompanied by an end to government wolf-control hunts, which has led to a sharp increase in wolf populations in Chukotskii *Raion* resulting in significant levels of predation on domestic reindeer herds.

This deteriorating economic situation saw the departure or death of 1,357 people from Chukotskii *Raion* between 1991 (out of a total of

6,568) and 1997 (*Otdel' Statistiki* 1991-1998: *Chukotskii Raion, Lavrentiia*). Almost all who departed were not ethnically Chukchi or Yup'it or native to Chukotka. This outmigration would lead the Chukchi and Yup'it population of Chukotskii Raion to constitute 43% of the population in 1991 to 67% of the population in 1994 to 76% of the population in 1997. As of July 1998, 1,451 people officially lived in Lorino, and 1,286 were Chukchi or Yup'it. Since 1991, Lorino has averaged 37 births per year, and 30 deaths per year, but with heavy outmigration (*Otdel' Statistiki* 1991-1998: *Chukotskii Raion, Lavrentiia*).

The deteriorating economic situation has led to a sharp rise in unemployment, though most of those employed have not been paid in two to five years, and use credit at the local store to acquire necessities, when available. The table below displays unemployment trends from January 1991 to October 1998 among the three reindeer herding farms of Chukotskii Raion.

Table 2. Regional Reindeer Enterprises Employment in *Chukotskii Raion*.

	1991	1994	10/1998	% jobs eliminated 1991-1998
KSP:	348	266	117	-34%
GT:	224	220	90	-41%
50V:	263	250	83	-42%

KSP = *Kollektivnoe Sel'skokhoziaistvennoe Predpriiatie "Lorinskoe"* (Lorino);
GT = Geroi Truda (Uelen);
50V = Imeni 50-Letiia Velikogo Ok'tiabria (Neshkan).
(*Otdel' Statistiki*, 1991-1998, *Chukotskii Raion, Lavrentiia*)

While no exact figures were made available, most government officials placed unemployment in Lorino at approximately 70%. Though these declining figures also reflect a readjustment of employment needs and availability of work, they also demonstrate that many who formerly worked for the farm have no skills allowing for re-employment elsewhere, if alternatives were available.

A final obstruction to the viability of reindeer herding in Chukotka, and one of the primary factors limiting the economic-ecological viability of reindeer herding in northern Chukotka in general, is the imposition of *raion* and *sovkhoz/kolkhoz* borders on the movement of reindeer herders and their herds. This is detrimental to the herds (and hence to the herders, their families, their farms, and their economies) because seasonal movement is blocked, which results in the inability to escape biting insects in the west in the summer and equally, the inability to escape bad weather (primarily icing) in the winter,

This system (of limiting borders) was established in the early 1930's and has, since that time, impeded seasonal movements. It should be noted that these politically defined boundaries were established to delineate each farm's territory, and overgrazing occurs now as often as *every season*, and without the equipment, planning, or economic capacity to maintain alternate food sources the reindeer simply die or are slaughtered for local consumption. It is important to note that the natural ecology and terrain of northern Chukotka does *not* support the high numbers 'artificially' maintained in Soviet times within these limited areas. According to administrators of the Bering International

Park, located within Chukotskii *Raion*, one reindeer requires on average 77 hectares of land to be supported for one year within Chukotskii Raion.

These economic problems largely have their origin in political policies of the Russian Federation and, more directly, of Chukotka itself. This coupled with ecological limitations demands a substantial reorganization of economic activities at the farm and regional level if the Collective Farm Enterprise 'Lorino' and other Chukotkan reindeer enterprises are to survive successfully as capital-based market-oriented producers of reindeer products. In general, economies that are based on the utilization of common renewable resources, such as the reindeer-reliance on access to pastures, often experience a state of economic crisis. In Finnmark *fylke*, Norway, economic crisis has emerged not because of social disturbance or a lack of infrastructure, but because of a 400% increase in the number of reindeer between 1950-1989 who depend on common pasturage, leading to lower slaughter weights and higher reindeer mortality (Karlstad 1998: 247). This increase is largely driven by the potential for profit in capital markets, but increases in herd size were expected due to the tendency to attach value to the self-reproductive capacity of pastoral capital (Paine 1994: 195).

The optimal situation, then, is to make values attached to pastoral capital and to the marketing of reindeer products mutually supportive. Jernsletten and Klokov have succinctly shown (2002: 51) how this optimal, sustainable situation may be attained, depending on intensity

of herding, annual quantities of reindeer products, and the market value of reindeer products:

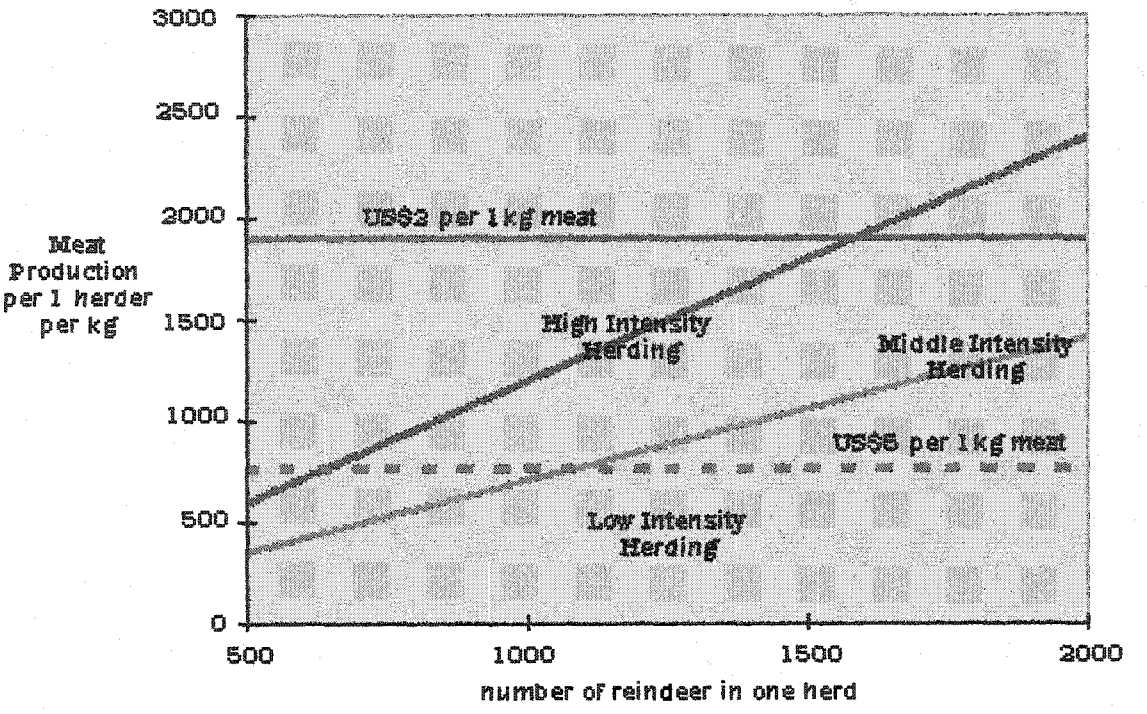

Figure 17. Levels of Sustainability of Reindeer Herding (adapted from Jernsletten and Klokov 2002: 51).

The Informal Economy and Reindeer Products

Most fundamentally, the informal economy includes those economic transactions that occur apart from the regulations of some governing body. What these transactions are and to what degree they are involved in the informal economy is variable. More specifically, the informal economy may be defined as those activities performed outside the formal economic system which augment deficiencies in income or

consumer opportunity (Halperin1994: 194-195). Furthermore, the informal economy 'cheats' governments out of revenues for investment into social programs ideally designed to benefit society as a whole.

While generally a less formalized version of an official economy, the informal economy, being essentially unregulated (though internal regulations do exist), differs by the nature of the extremes attainable in the absence of such regulations. This includes high degrees of worker exploitation, as well as the hoarding of wealth and power, and the erection of social barriers to prevent loss of wealth or power. The resulting conflict between private and public directives, and the structures that enable the co-existence of two economies, reveals the importance of individual actors in the economic process.

The informal economy always exists in conjunction with the formal economy, though in culturally specific contexts. Specifically, the informal economy operates as an 'anti-economy,' including pluralism, variability, and change within economic systems. Therefore, the informal economy may represent a traditional 'anachronistic' exchange system, or a progressive alternative to the formal system of exchange. This must be proposed within the concept that while the formal economy is defined as the mainstream, and therefore dominant economy, an informal economy may be a primary system of exchange among social elites or the socially oppressed. As non-marginal dynamic systems, informal economies are also organized and instituted in society. As an analytical tool, then, the informal economy reveals much about a society's economic structure.

Among reindeer herders in general, such informal economic transactions occur, sometimes regularly. Whether through a situation of reciprocal sharing or in response to a scarcity of resources, an exchange of resources does occur. Such exchanges take place within the context of traditions of exchange or extenuating needs, but nevertheless within some type of regulatory structures. In the case of a weakened or failing market, informal economic transactions invariably increase, as is evident in the dire economic situation of the Chukchi of Chukotka.

SUMMARY

The economic process of reindeer herding has its roots in production for subsistence. Nevertheless, the demands of the all-inclusive global economy include the participation of reindeer herders in a global market for reindeer products. As demonstrated above, this market is very limited, and with the requirements of successful participation in a global market largely unmet, including production, transportation, and processing infrastructure, success has been limited, and in some cases, non-existent. However, reindeer herding need not specifically, exclusively, or even partially be involved in a global, capital-based reindeer market.

Due to the material and fuel-dependence of most of the world's reindeer herders on global markets, however, and the demands of taxes or other revenues from governments, at least some participation in a global reindeer market usually occurs. At the other extreme, some

reindeer enterprises in regions beyond those of the case studies are entirely based on market demands and supply little or nothing to subsistence. It seems evident, then, that reindeer herding as an economic process will take an ever-increasing variety of forms, from one household reindeer used exclusively for subsistence, to extensive herds intended solely for the production of reindeer products for the market.

Contemporary reindeer herding, as a combination of subsistence-oriented and market-oriented principles, possesses a long tradition of maneuvering within both economic spheres. Though capitalism as an economic system is not inherently a problem for reindeer herders and the marketing of their products, the vulnerabilities of global markets can be disruptive to a reindeer herding enterprise. This is in large part due to the lack of influence possessed by reindeer herding populations in setting economic policy concerning reindeer products. Lack of influence in setting economic policy is further exacerbated by the limited facilitating infrastructure, especially in the sphere of distribution. Finally, local institutions may be inappropriate for facilitating successful involvement in the market economy for reindeer products. These economically limiting factors are inseparable from political factors discussed in the following chapter.

CHAPTER 6

REINDEER HERDER RELATIONS WITH THE STATE AND INDUSTRY

INTRODUCTION

Beginning with an assessment of the relations between reindeer herders and industry, the role of industry in the emergence of contemporary forms and traditions of reindeer herders is provided. This importantly includes ecological ramifications of industry in the case study areas, and the potential for the sustainable co-development of reindeer herding with industry. Also included is a consideration of the relationship between the state and reindeer herders, particularly within the scope of legal issues. These include formalization of customary law, representation in regional and national governments, and the issue of autonomy.

THE ROLE OF INDUSTRY AND ITS ECOLOGICAL RAMIFICATIONS

Modern industrial activities play an important role in the ecological relationship between humans, reindeer, and the environment. Igor' Krupnik has noted (1992b: 218) that unbridled industrial expansion in the past had already modified the ecological balance of much of the Soviet Arctic. In the late 1980s the press began to reveal the critical state of the economy, cultures, and systems of resource management in

the Far North, and the effects of environmental degradation. Environmental degradation usually results from insufficient or unenforced pollution controls. Industrialization, however, is believed by some to be inevitable, and to support traditional forms of cultures and resource use and to preserve their environment is deemed artificial. New, more open discussions have the potential to enable debate concerning the future of the Far North. This could either preserve or radically transform traditional systems, including reindeer herding endeavors. Many reindeer herders continue to need heavy support. especially when reindeer herding is the only profitable way of life for the indigenous population and the most viable culturally (Krupnik 1992b: 219).

However, alternatives are possible. Krupnik suggests (1992b: 219-220) that under a condition in which a semi-industrial form could arise, a number of alternatives would be present and necessities met. First, Krupnik proposed construction of giant fences around pastures--an idea which is currently being seriously considered on Alaska's Seward Peninsula. As well, the making of permanent shelters in the field with modern conveniences will enable herders to be closer to their herds and in more regular contact. The use of a shift system for herding and hunting, coupled with the use of modern portable dwellings, could make the reindeer herder's life somewhat more comfortable. Of course, it would also serve to indebt the herder or herding organization as equipment, fuel, and maintenance costs increase. For this reason, the use of shift systems has been criticized as fundamentally altering cultural institutions. As long as the infrastructure necessary to get

reindeer products to markets are in place, profits gained from the sale of reindeer could be used to support industrial aspects of the herding endeavor. In fact, the fight for clean water and preservation of hunting grounds has become equated with cultural, ethnic, and sociocultural demands (i.e., Association of the Peoples of the North).

With the notable exception of the Chernobyl incident, reindeer and their herders in most other regions of the circumpolar North are largely free from serious environmental degradation or disruption. This leads to other forms of environmental degradation, caused ancillary or originating from a far off locale. Such global tendencies, which cause a more rapid disruption of ecosystemic weather patterns in polar regions, indirectly affect reindeer herds. In Chukotka and on the Seward Peninsula, an increase in total numbers of caribou, and with it an expansion of a caribou herd's range, has occurred. This may be climate driven, but it is unclear. This expansion leads to mixing of herds, as reindeer invariably are siphoned from their own herd into that of the caribou. Effectively, this creates a loss for the herder, since these "feral" reindeer are difficult to separate from the caribou herd.

These problems are exacerbated by the prevalence of political motivations in land reform policy-making and implementation. Such policies tend to favor industry in most cases, rendering local communities relatively powerless. This is coupled with efficiency problems, which are presented as a cover for political interests and which lead to demands for further structural reforms (personal research, 1998). This issue can be well-demonstrated by the 1998 restructuring order in

Chukotka in which all farm enterprises were required to reorganize into joint-stock companies with 51% of shares (i.e., the controlling share) owned by the government, after which social services formerly supplied by the collective farm in Soviet times will ideally be supplied by the administrative arm of the government's political structure.

LEGAL POLICY AND CUSTOMARY RIGHTS

Legal policy concerning reindeer herders involves a combination of state-oriented legal policies and consideration, and ultimately, hopefully, a consensus with customary law. Customary law can be defined as "a law which derives its existence and content from social acceptance" (Woodman 1999: 15). These laws are often portrayed as legitimate by ruling state-institutions only if they have been in existence for some time, but Woodman explains (1999: 17) that customary law is frequently in a state of change, and such a temporal qualifier serves only to prevent its recognition. Customary law has been most deeply explored and recognized among the Saami of Norway, and so the following discussion will focus on the Finnmark Saami,

Among the Saami of Finnmark, some attempts to formally recognize Saami customary law into civil law have been made. The Saami of Finnmark possess legal assistance and representation through the Legal Aid Agency of Inner Finnmark, which assists Saami and non-Saami alike to understand laws derived from customary practice. Most fundamentally, this includes the important Reindeer Herding Law, which

provides Saami reindeer herders with the right to herd reindeer exclusively and the right to ear-mark animals with notches that are unique to each owner. Furthermore, the Reindeer Herding Law also formally defines women's legal position in reindeer herding, the right to pasture and activity areas, the right to utilize natural resources, access to outfields, and collective and individual rights and obligations, all based on the assessment of customary rights (Nikolaisen 1999: 89).

Since the implementation of the Reindeer Herding Act of 1978, Section 4, paragraph 2, "operational unit" is defined as a reindeer herd that is owned and operated by one responsible leader (including the reindeer of the spouse of the leader). The principle of *pater familias* had been imposed into a cultural system in which the spouses had previously been equal. This imposition led to negative consequences to women's position in reindeer herding. Though a woman still retained her traditional social position, she was now legally subservient to her husband in terms of taxation and income (Nikolaisen 1999: 90).

Prior to the Reindeer Management Act the right to mark reindeer ears was established through consensus of a verbal nature among the *sii'da*. As well, it was traditionally allowed for owners of reindeer, especially the reindeer of settled Saami, to keep their animals with other herders, especially alongside the reindeer of other settled Saami. The Reindeer Herding Act of 1978 restricted the right of ear-marking, excluding everyone but the parents' siblings. This represented a breach with the Saami definition of family (where even second cousins are perceived to be close relatives) (Nikolaisen 1999: 90).

For the establishment of one's own production herd today, one of the parents or grandparents must have practiced reindeer herding as his or her main livelihood, and a regional board must approve of such an establishment of a new herd. The Reindeer Herding Act of 1978 changed the internal rules of reindeer herding, and though the old set of rules still exists (usage of verbal agreements continues), Norwegian law is used as advantage between adversaries. In addition, regional boards are built on the principles of power traditional to the Norwegian social system, such as majority vote (Nikolaisen 1999: 90).

A herding district in Finnmark consists of several *siidas* of varying sizes, with the largest *sii'da* getting the most seats on the district board. This means that the smallest *sii'da* have little real influence, which significantly upset the traditional local balance of power. Traditionally, the *siidas* have maintained *consensus* rather than majority-rule as their form of decision-making, and district boards have become a medium and forum for private interests. These district boards are also administrative organs since they distribute public grants. The Legal Aid Agency of Inner Finnmark therefore recommended that a systematic review of the existing laws be initiated with the goal of acquiring consensus and equality between the Saami people's legal perceptions and Norwegian law (Nikolaisen 1999: 90).

In 1996, the Norwegian Ministry of Agriculture finally clearly expressed that the rights of reindeer herders do not rest upon Norwegian law alone, but have their foundation in age-old use. However, the State Forest Administration, which manages the grazing lands within

Finnmark, seems to act in such a way that the herders simply have to yield to developmental expansion. In 1997 the Saami Rights Commission determined that herders have age-old usage rights which should be protected from expropriation. If these rights are not protected, then herders and herding will be subjected to lengthy and costly legal struggles (Bull 1999: 124).

Among the Kola Saami and Chukchi, customary law has been preempted by Soviet, and now Russian Federal law. Much has been said concerning the inadequate recognition of customary rights among the native groups of the Russian Federation. Aleksandr Pika (1999: 29) identifies three areas of uncertainty which stand in the way of the development of an equitable, formal legal status for minorities. First, Pika points out that the links between the rights of the state and the rights of the people are problematic. Second, the relation of the rights of peoples and the rights of the individual is unsettled, as is a resolution of the legal nature of the links between international norms, the rights of peoples, and the legal codes (practices) of particular cultures.

During the second half of the nineteenth century, native peoples began to clamor for more self-determination within the context of customary laws. Since then, various degrees of political autonomy have been granted. However, Pika (1999: 32) calls for the creation of ethnic law, which would not encroach upon the general civil law and could coexist with it. Ethnic law would address primarily culturally specific issues and would strive not to be contradictory to existing state law.

And finally, among the Iñupiat of the Seward Peninsula, customary law is largely formally subsumed under the subsistence preferences granted to Alaska natives under state and federal law. However, while subsistence rights of usufruct have been granted, sometimes severe restrictions on type or amount of prey hampers success. This has led to impassioned discussions about subsistence rights, and both passive and active organized resistance has followed (Bodenhorn 2000: 146). These issues of customary rights among the Iñupiat, however, have little affected reindeer herding, and are limited to the issue of whether or not to return reindeer herding to a native-only economic endeavor.

Considering international legislation through the United Nations, a series of conventions has been adopted since the end of the Second World War. In 1957 the International Labor Organization Convention Number 107, entitled "Concerning the Protection and Integration of Indigenous and other Tribal and Semi-Tribal Populations in Independent Countries," was passed. This convention outlined the responsibility of national governments to protect the rights of indigenous peoples, including customary rights of land-use. While this convention was accepted by governments of nations in which reindeer herders lived, its tenets were not consistently upheld (Pika 1999: 33).

This was followed by the 1989 passage of Convention 169, entitled "Concerning Indigenous and Tribal Peoples in Independent Countries." This convention further outlined in Part II, Articles 13-19 the expectations on the relation of national governments to issues of land ownership and access. Though not ratified by all governments,

Convention 169 has been widely accepted and serves as a policy basis for governments' internal relations with indigenous peoples and their concern for land rights. Convention 169 continues to be the most enduring international attempt to formally define land ownership and access by indigenous peoples, including reindeer herders.

Since 1992, the United Nations Working Group on Indigenous Populations has produced a series of drafts of the "United Nations Declaration on the Rights of Indigenous Peoples," which as of 2003 has yet to be finalized. This draft declaration, now well known among native activists worldwide, addresses issues of land tenure in Part IV, Articles 25-30. Besides guaranteeing the right of access or ownership of traditionally used lands, this declaration also calls for restitutions for confiscated or damaged lands. As well, it calls for the prohibition of military activities on traditional lands unless consent is granted by the indigenous population. Many governments express support for this new declaration.

CONTEMPORARY POLITICAL STRUCTURES

An array of political structures has arisen recently among reindeer herders in the circumpolar North. Each of the case studies represents the general situation of political organization of reindeer herders today, being derived from each of the three macro-political regions where reindeer herding is practiced, i.e. the Fennoscandian social democracies, the Russian Federation, and the United States (Alaska). Within these

macro-regions, similarities are many, though significantly different political situations exist between macro-regions themselves. Contemporary political structures include both local elements and regional or even international organizations.

The most well known of these organizations are the Saami Assemblies, also known as the Saami Parliaments (Saami: Sámediggi, Norwegian: Sameting), which in 1989 gave a measure of autonomy to Norwegian Saami. The creation of the Norwegian Saami Assembly was considerably preceded by the creation of a Saami Assembly in Finland in 1973 and was followed by the formation of one in Sweden in 1993. In Norway, the Saami Assembly plenary consists of 39 representatives elected from 13 electoral districts in Norway. The Saami Assembly election is held on the same date as the election to the Norwegian Parliament, every fourth year. The Saami Assembly plenary meets four times per year, with each session lasting five days.

The administrative duties, powers of initiative, and authority of the Saami Assembly are stated in article 2.1 of the Saami Act:

> The business of the Sámediggi is any matter that, in the view of the Sámediggi, particularly concerns the Saami people. On its own initiative, the Sámediggi may raise, and pronounce upon, any matter coming within the scope of its business. It may also on its own initiative bring a matter before public authorities and private institutions. The Sámediggi has the power of decision when this follows from other provisions of the Saami Act, or is otherwise laid down. (Hivand 2002: http://samediggi.no/)

Therefore, the Saami Assembly serves two purposes. First, the Saami Assembly acts as the Saami-political instrument and encompasses the Saami Assembly's powers of political initiative. Second, as an administrative organization, the Saami Assembly covers various administrative tasks which are carried out by departments (Hivand 2002: http://samediggi.no/).

Through the Saami Assembly, the Saami of Norway (and Finland and Sweden through their respective Saami Assemblies) are attempting to achieve a fair and real equality between Saami culture and mainstream Fennoscandian culture. The Saami population is numerically small relative to the national populations of Norway, Sweden, and Finland, and consequentially does not possess much political influence. Therefore, social equality is to be achieved through the implementation of special programs (essentially, positive discrimination) by the national governments. This demands that the state provide sufficient resources to maintain and develop Saami culture according to the Saami's own goals. These resources include, in part, access to pasture, legal protections, and the right not to be outcompeted by larger, wealthier, more market-oriented commercial herders.

These rights and goals provided to the Saami Assembly by the Norwegian government have their basis in the International Labor Organization Convention 169 concerning indigenous peoples and tribal peoples in independent states. The Convention requires that indigenous peoples are guaranteed by national governments the protection of culture and lifestyles, the development of indigenous cultures on their own

terms, and the right of self-determination (ILO 1989, Part I, Article 2). In Norway, Convention 169 was ratified on 20th June 1990 (Norway was its first signatory) , though it has yet to be fully incorporated into Norwegian law as of 2003. By the rights guaranteed by Convention 169, the Saami Assembly has claimed legal protection to secure the existing customary rights and existing use of land and demanded participatory models for management of these rights as a part of the rights to political self-determination within the nation-state (Oskal 1999: 49).

While no such Saami Assembly exists for the Kola Saami, access to and membership in the (Nordic) Saami Council (with other Nordic Saami and North American Saami) was gained in 1992. This precipitated the dropping of the term "Nordic," and today this organization is referred to as simply the Saami Council. Founded in 1956, the Saami Council is a representative body whose general purposes are to promote the interests of the Saami as a nation, to consolidate the feeling of affinity among the Saami people, to attain recognition for the Saami as a nation, and to maintain the economic, social and cultural rights of the Saami in the legislation of the four Fennoscandian nation-states for cooperation between the Saami of these different nation-states (http://www.saamicouncil.net/english/council.htm). The Council was set up to safeguard and promote the economic, social, and educational interests of the Saami. The Council also tries to support and strengthen unity and mutual understanding among the Saami, and to publicize the situation and goals of the Saami people. Generally, national governments tend to work alongside organizations such as the Saami

Council, though agreements and initiatives are sometimes carried out slowly or with little conviction.

Perhaps as relevant to the Kola Saami, and critically important to the Chukchi, was the 1990 Congress (Parliament) of the Numerically Small Peoples of the North, Siberia, and the Far East. Originally, this was to lead to the formation of the Assembly of the Small People of the North. This organization was never constituted, though, due to the 1991 breakup of the Soviet Union. Nevertheless, the Congress and the constitutional basis of the Assembly were instrumental in the formation of what is called the Russian Assembly of Indigenous Peoples of the North (RAIPON) (Assotsiatsia korennykh malochislennyx narodov Severa, Sibiri i Dal'nego Vostoka Rossiiskoi Federatsii (AKMNCCiDV RF). These endeavors laid the basis for future political developments among the Chukchi, Saami, and other northern indigenous minorities.

Besides the creation of regional associations (such as the Association of Kola Saami, the Society of Eskimos, and The Association of Numerically Small Peoples of Chukotka and Kolyma, Nordic Saami Council (cf., above), Inuit Circumpolar Conference), the Congress of the Numerically Small Peoples of the North led to the formation of the Northern Natives' Deputies' Assembly (Moscow, May 1991), the creation of a "mini-UN" (April 1992), and the institutionalization of the International Fund for the Survival and Development of Minority Peoples (Pika 1999: 60). Additionally, the Congress, RAIPON, and the Deputies' Conference demanded minority representation at all levels of power, which could be guaranteed by the fixing of special quotas for deputy

mandates, the creation of councils at all levels of a bicameral system in which one of the chambers is reserved exclusively for indigenous peoples' deputies, and the formation of special deputies' commissions with the power to veto decisions affecting the interests of represented peoples. These demands, however, were ignored.

As well, representatives of northern peoples called for the granting to RAIPON the status of a sociopolitical organization representative of all northern peoples. This would be complemented by the inclusion of an article to the constitution of the Russian Federation formalizing relations between the state and minorities, and the ratification ILO Convention No. 169 (1989) and to meet the obligations therein (Pika 1999: 60). The main objectives of a new state policy concerning northern minorities were seen to be necessarily based on state, cultural, regional, and northern native interests, to include the diminishing of the negative effects of economic, social, and demographic and cultural development, to minimize ethnic tensions, and to help northern peoples achieve a high level of economic independence. All of these developments would promote social stability through economic stability (Pika 1999: 61). All of these non-governmental organizations emerged in reaction to dissatisfaction with state policies and political institutions, and effectively subsumed local political organizations into the state system. However, this vision was not realized.

In addition to these initiatives, local associations have attempted to formally define their rights both as citizens of the Russian Federation and as indigenous peoples. Debra Schindler reports (1994) a series of

demands which, though formulated by associations in the Chukotka and Magadan areas, has led to the creation of an agenda now shared by all of Russia's indigenous peoples. Briefly, this agenda calls for allowing Native peoples to have control of traditional economies including hunting, herding, and fishing. Indigenous land use for hunting and herding must have priority over industrial activities, which themselves must be halted until agreements can be reached over control of resources and until environmentally sound practices can be implemented. Additionally, Native peoples must have political rights including fair representation at all levels of government. The spiritual development and rebirth of Native cultures depends on the strengthening of national languages, culturally appropriate education and employment afterwards, and the revival of ancient rituals and ceremonies. Finally, the physical survival of Native peoples is at a critically low point, and adequate health care must be a priority (Schindler 1994: 94-95).

On the Seward Peninsula, the Kawerak, Incorporated's Reindeer Herders Association serves as the administrative body for reindeer herding from St. Lawrence Island to Kotzebue. The Association works with the Bering Straits Regional Corporation (BSRC) to monitor and regulate the reindeer industry on the Seward Peninsula, and acquires access to government lands for pasturage for its members. In 2000, there were fourteen herders holding designated reindeer ranges on the Seward Peninsula (Dau 2000: 57), and in 2002 Kawerak reported 21 members, less than half of whom have actual herds to manage due to losses to caribou incursions. Kawerak also assists Seward Peninsula and St.

Lawrence Island reindeer herders with the marketing and distribution of reindeer products.

It is recognized that these contemporary political structures are not analogous to each other, each possessing differing levels of authority and mandates over reindeer herders and their activities and representation. These organizations are a direct attempt to transcend problems of local political control. As such, their influence, effectiveness, and scope are variable, ranging from the organization of international and transnational political action to the management of local operational needs.

OVERARCHING STATE POLITICAL STRUCTURES

In regions where reindeer herding is practiced, the nation-state has been increasingly present and intrusive. indigenous political structures have been modified or replaced in all areas where reindeer herders live, and their economies have been increasingly directed towards surplus production. While this leads to an increase of trade, at various times much of the revenue or capital is expropriated by government or business interests. In some parts of the Russian Federation, including Chukotka, this practice continues. Additionally, governments have sought to limit or regulate reindeer pastoralism and the reindeer industry to traditional Native herders, often protecting it as a cultural institution.

Social structures and institutions in Russia have undergone significant changes in the post-Soviet period. The implementation of

Russia's privatization program (1993-1994) seriously disrupted the viability of *sovkhozy* and *kolkhozy*, and especially affected those farms oriented towards reindeer herding. This has threatened perceptions of power legitimacy among the populace, and has caused current structures to emerge as symbols of power use and abuse. Many of the problems endured by reindeer herders and their herds, however, have their origin in the Soviet period, and still limit the viability of reindeer herding as a sustainable market-oriented enterprise. Ironically, a new shift towards familiar old structures is now being promoted in some areas of the Russian north, with a realization of the limited viability of producing and marketing reindeer products as a capital enterprise.

As the economy steadily worsens, largely due to infrastructural neglect and decay, political solutions are promoted bearing similar qualities to the collective organizations of Soviet times. As symbols of a former time of stability, these 'new' programs have been accepted by many reindeer herding enterprises, offering legitimacy to the existing power elites. The emerging legitimacy of this corrupt, authoritarian political structure is, ironically, increasingly based on control and distribution of food and fuel resources.

In Finnmark, 96% of the land is owned by the Norwegian government as sole proprietor (Pedersen 1991: 69). As land-owner, the government forces political and legal rules onto the population dwelling on or depending on resources from the land. These government regulations affect hunting and fishing as well as herding and must be followed whether or not they are in accordance with local customs. This

situation differs from other counties in Norway and until 1972 was unchallenged. This combined with the protests of the Alta-Kautekeino hydroelectric dam project led to the Crown's reconsidering of its own land rights and the formation of the Royal Commission on Saami Rights.

This difference in how Norwegian political institutions affect Saami in other counties is marked. Smaller communities in other more southerly areas have legal protection of inherited rights to use so-called common lands. These common lands are defined as delimited areas where local people are in varying positions of exercising control over the utilization of resources (Pedersen 1999: 129). Nevertheless, a gradual disappearance of Saami rights over their territory accompanied the rise of Norwegian Crown power following the separation from Denmark in 1814. The recovery of these rights from the Norwegian Crown has characterized political institutional relations ever since (see "Customary Rights" above for more information on these changes).

The reindeer herders of Alaska have long been regulated by a number of bureaucratic institutions. Besides the need to obtain grazing permits from land management agencies, limits on herd size are in place to prevent overgrazing. Additionally, once the herd size exceeds its limit, excess animals must be eliminated. Consequentially, this limits the number of reindeer available to produce meat and antler-velvet for local communities and commercial markets (Simon 1998: 294). Finally, Alaskan state and U.S. Federal business and commercial laws affect the

conduct of reindeer herding among the Iñupiat, usually in the form of production and trade regulations and permitting.

ISSUES OF AUTONOMY

Autonomy has long been an issue of conflict between reindeer herders and the more powerful nation-states into which they have been incorporated. Levels of autonomy range from merely formal designations of autonomy in Russia to political-legal autonomy in Alaska (i.e., Native corporations and self-rule boroughs such as the North Slope Borough). Autonomy for Saami reindeer herders in Finnmark is determined almost exclusively legalistically, with territorial autonomy greatly limited. In Russia, various degrees of political autonomy have been attempted by reindeer herding communities, including the *obshchina*.

Political Autonomy

In each of the four case studies, varying degrees of local autonomy exist. Likewise, varying degrees of effort are being spent to increase local autonomy, and in some areas, particularly in the Russian Federation, autonomous territories, ostensibly oriented towards indigenous reindeer herding peoples, exist. However, the immigrant population into these autonomous regions is usually significantly higher than the indigenous population for whom the region is named. The indigenous populations of these autonomous regions in Russia range from 1.5% in the Khanty-

Mansi Autonomous Okrug to 20% in the Koriak Autonomous Okrug (Pika 1999: 79). Additionally, while in such regions as Chukotka Autonomous Okrug, regional autonomy does exist, yet little representation of Chukchi or other herders is present.

Nikolai Vakhtin and Igor' Krupnik (1999: 28) call for a re-evaluation and restructuring of native political, ethnic, and cultural self-images to address the current situation, which is particularly bleak in Chukotka. This marginalization has led to two predominant motifs in responses from 'reindeer' Chukchi. Some believe that if they could go back to the tundra, then traditional ways would be revived. Others, however, express the feeling that their young have forgotten everything, and that their Chukchi culture is on verge of extinction. But on personal observation (1998), it seems that the primary threat to indigenous lifeways is the misappropriation of revenues for personal consumption by the ruling elite, which is almost exclusively non-Chukchi. Indeed, Vakhtin and Krupnik (29: 1999) point out that across the former Soviet Union, local administrations gained power at the expense of federal agencies.

The Saami of the Kola Peninsula, too, are a minority in their native land. By the end of the Soviet period, there were only slightly more than 1,700 Saami living in the entire Kola Peninsula (Kiselev and Kiseleva 1987: 29). By 1995, only 1625 people on the Kola Peninsula were identified as Saami (Sergejeva 2000: 20). These Saami are scattered throughout the Kola Peninsula, and representation as Saami is largely limited to their recent inclusion in the Saami Council (see above). The

Kola Peninsula regional administration within the Russian Federation is the Murmanskaya *Oblast'*, but little direct representation of Saami or other herders exists. Part of the reason for a lack of local autonomy in the Kola Peninsula is the strong military presence in the region, particularly in the city of Murmansk, an important Russian naval facility (primarily submarine) with a year-round ice-free port.

In Finnmark, and in Norway as a whole, the Saami are much more numerous, though still comprise a minority population. In addition, the right of the Saami to maintain their culture and language and to establish representative political bodies of their own has been guaranteed by Norwegian law (known as the 'Saami Law') and by an amendment to the Norwegian Constitution (Oskal 1999: 43). As in the Russian Federation, the Saami of Finnmark are not struggling for separation but for inclusion in the political community under equal cultural conditions and for local autonomy, especially concerning issues of reindeer herding and, to a lesser extent, fishing (Oskal 1999: 51).

On the Seward Peninsula (and throughout Alaska), issues of political autonomy are regulated by Alaskan state law and federal law which effectively allows for local political autonomy. The formal conditions of this local autonomy are largely defined through the Alaska Native Claims Settlement Act (ANCSA) of 1971. In addition to municipal administration, native corporations created by ANCSA were to oversee and protect the lands entrusted to them, and to earn profits for corporation stockholders. The shares themselves were issued only to Natives born on or before December 19, 1973, and so younger generations

could obtain shares only through inheritance or purchase. This threatened to disenfranchise a generation by separating them from decisions regarding the land until late in life (Bodenhorn 2000: 142). Also, ANCSA allowed for the sale of land on the private market after twenty years, weakening the protections preventing the political loss of the land through its sale.

Transition to Local Forms of Self-Government

The political developments towards autonomy, at least within the existing nation-states that control reindeer herders' traditional lands, have necessitated the development of local forms of political organization. The forms political institutions take among reindeer herders are dependent on traditional concepts of social organization coupled with national governmental institutional traditions. In Chukotka, locals are beginning to see their locality as their place of identification, and a sort of Chukotkan nationalism has arisen among both natives and non-natives, replacing the lost paradigm of "the Soviet people" (Vakhtin and Krupnik 1999: 34). However, there remains apprehension concerning the 'freedom' to reorganize based on the 'family contract,' fearing a forced return to previous systems or the rise of arbitrariness in the new system (Vitebsky 1992: 235).

Three major stages of Soviet policy towards northern peoples led to conditions of varying degrees of autonomy or the lack thereof. The first period began in 1929 with the spread of collectivization to reindeer herds

and lasted to the early 1930's. This period was characterized by assistance-oriented education, local self-government, the formation of cooperatives, and the accommodation of native social relations and economic forms to Soviet cultural construction. This period was followed in the early 1930's to the middle of the 1950's by the formation and strengthening of the totalitarian administrative command system. This included intense exploitation by the state of the native labor pool and the strict fulfillment of state plans for processing meat, fish, and furs. From the middle of the 1950's to 1980's, government policy was characterized by state bureaucratic paternalism which included a system of minor privileges, perks, and ineffective aid measures. Emphasis was placed on industrial development of northern native territories and the mechanization of reindeer herding where possible (Pika 1999: 59).

Increasing autonomy and transition to forms of self-government among the Finnmark Saami are currently linked to the re-establishment of the legitimacy and validity of Saami customary law. An in-depth discussion of the contemporary state of Saami customary law is provided below under "Customary Rights." The most conspicuous institution of emerging Saami self-government is the *Sámediggi*, the Saami Assembly, which is discussed in detail above. Currently, the Saami Parliament is attempting to secure the same usufruct rights as those possessed by Norwegians in southern Norway, thus ending discrimination. The Saami Parliament also has claimed legal protection to secure the existing customary rights and existing use of land, and has demanded participatory models for management of these rights as a part of the

rights to political self-determination within the nation-state (Oskal 1999: 49).

Within Finnmark itself, however, the Saami Rights Commission (formed 1980) is working to force recognition that usage rights of reindeer herders are based on age-old use, thereby granting a degree of autonomy. As an extension, the Saami Rights Commission proposes that reindeer herders have a legal protection against the expropriation of land (Bull 1999: 124). It seems that the recognition of these rights has yet to be demonstrated by various levels of the Norwegian government, and consequentially reindeer herders remain potentially threatened.

The Seward Iñupiat situation is perhaps the most stable, and local autonomy is essentially in place, though is limited to villages and lands set aside for Native ownership with the Alaska Native Claims Settlement Act (ANCSA). Otherwise, Alaska Native communities are politically integrated into the state and national political system of representative government. Notably, as mentioned above, reindeer herders are required to obtain permits to access grazing lands administered by governmental bureaucracies. This limits the political autonomy of reindeer herders on the Seward Peninsula by creating a situation of economic dependence, and therefore political dependence, on the government. Semi-autonomous local tribal governments, however, are in place, and direct most community affairs.

A Note on Neotraditionalism

Perhaps one of the most promising, though as yet unimplemented, approaches to political autonomy and self-determination among reindeer herders are the principles of neotraditionalism. Essentially, there exists two principles of neotraditionalist thought. First, there is a recognition of the need for better political representation for northern peoples, including the empowered presence of territorial-based and community-based self-governments. This can be accomplished most expediently by delivering economic assistance directly 'into the hands' of native groups rather than delegating it through 'middleman' levels of bureaucracy. Additionally, there exists a need for a concentration of native efforts at local, autonomous levels, which would lead to the establishment of localized power. This would enable the meaningful exercise of power at the local level by locals themselves, and this forms the basic tenet of neotraditionalism.

The propositions of neotraditionalism include a number of changes and initiatives necessary to enable its functional establishment. First, the repudiation of paternalism must occur to allow for local autonomy and, thereby, decision-making. For this to occur, funds need to be directly allocated to northern peoples, and the transfer of the means of production (land, resources, economic rights) to *obshchiny*, family-clan groups, northern associations, and/or individuals can enable a transition to economic independence (Pika 1999: 23). The redirection of new native power bases in more localized political institutions (*raiony*,

obshchiny) and the instituting of local self-government would also further effective indigenous decision-making abilities (Pika 1999: 24). This policy could be directly applied to reindeer herders in all the case study areas.

Within considerations of the political economy, the repudiation of compulsory state purchases and contracts, including the right to decide how and when to dispose of and consume local production, must be allowed. A synthesis of traditional and non-traditional use of resources, and state assistance in market relations with potential buyers, which will lead to entrepreneurial activities in non-traditional branches of economy (i.e., infrastructure development and support, tourism, and services) (Pika 1999: 24), can occur only if equitable and constructive relations exist between local communities, local governments and related structures (i.e., associations, councils of elders, *obshchina* and village corporations), and central state organs (Pika 1999: 25).

An equality emphasis on the goals for the economic development of northern regional industry and the traditional economy of northern peoples would allow for reindeer herders to have a meaningfully powerful voice in local decisions concerning resource development, and could lead to equality between prudent environmental use and ecological rationality. This would empower local people in the preservation and development of ethno-cultural distinctiveness, and would necessitate a more active social policy from the central state power towards northern peoples to promote local and national stability (Pika 1999: 25-26).

While these tenets of neotraditionalism are designed for application to the post-Soviet situation of Russia, they may be readily

applied throughout the circumpolar North. In some regions, here notably in Finnmark and on the Seward Peninsula, many of these tenets are already in place, albeit within different sociohistorical contexts. These include increased representation and the relatively empowered presence of community-based governing institutions in both cases. It should be noted that while the basic tenets of neotraditionalism may be widely accepted in principle, neotraditionalism itself was an academic-developed policy which was never implemented as political policy. Nevertheless, neotraditionalism at once provides a platform for mutual respect through the recognition of the right and need for local communities to make political and economic decisions themselves, and provides a basis for cultural survival.

SUMMARY

Political structures and organizations among reindeer herders have undergone many changes over the last one hundred years and, especially in Russia, significant change in the last fifteen years. How various reindeer herding peoples dealt with this change depended greatly on historic circumstance, and on the nature of relations with the political and economic institutions, and the elite of the dominant society and state. Invariably, increased degrees of economic infrastructural development coincides with degrees of culture change and language loss stemming from contact and trade with colonial, imperial, and capitalist states. Among the contemporary reindeer herders of the circumpolar

North, the twenty-first century is witnessing a revival of traditional native political structures and rights.

Industry, too, plays an important role in the economies of reindeer herders. While some industries threaten the ecological health of an environment due to overexploitation and pollution, they also provide markets for reindeer products. However, since dominant economic and political structures are codependent in maintaining power, the concerns of reindeer herders are often overlooked or ignored, thus compromising the sustainability of reindeer herding ecologically and economically. Through the creation of internal or international non-governmental organizations, and through the development of customary law into formal, state-sanctioned law, awareness of problems and acquisition of protections can be realized.

Importantly, to be effective, this process must include significant degrees of local autonomy, including the self-management of resources. Any attempt to mandate the involvement of reindeer herders in capital-based global markets has met with minimal success, especially when coupled by the unwillingness or inability of state and industry elites to foster such involvement through the expansion and maintenance of appropriate infrastructures, However, as a marginally profitable or unprofitable capital endeavor, reindeer herding as an industry occupies an often unnoticed economic niche.

CHAPTER 7

DISCUSSION AND CONCLUSIONS: SUSTAINABLE REINDEER HERDING

The general decline and change in reindeer herding in the late 20th century is a result of the structural incompatibility of reindeer pastoralism and global capitalism, but decline is not uniform. Such decline and incompatibility also applies to other forms of pastoralism in the contemporary world. Indeed, as Galaty and Johnson acknowledge (1990: 29):

> The marginal lands of the world--the plains, deserts and mountains of Central Asia, the African rangelands, the Southwest Asian Steppes, northern India, and the Americas--which have sustained, and been sustained by, pastoralism have become locales of change. If not previously, pastoralists are one type of citizen among many, confronted with alternatives to animal production, forced to struggle for and defend their resources, required to justify their ways of life to neighbors and nations alike.

This applies equally well to the reindeer herders of the tundra and forest. Intensification of production or abandonment of pastoral lifeways seems to be the choices confronted by most pastoralists.

Potentially sustainable elements in the current practice of reindeer herding, however, such as its aspect as a subsistence economy and a local focus of identity, have been revealed. It is shown that though

reindeer herding will likely survive as an economic activity, its role in the global market is likely to remain very limited, primarily supplying local and regional demands. This can be best described as a 'dissonance' between reindeer herding as a capital enterprise and reindeer herding as a subsistence activity, though production for subsistence has always been accompanied by production for accumulation for market-oriented exchange. As an economic specialization, however, the production of reindeer products for a market has been limited by local needs and by the natural environment. The dissonance between reindeer herding and market capitalism, then, is not based on an inherent incompatibility between capitalist economics and reindeer economies, but by the competition with industrial forms of agriculture, encouraged and supported in general by market capitalism.

This dissonance applies to all four case studies, though in differing degrees. This difference largely rests on specific historical contexts affecting each case, which has led to an array of political situations within which reindeer herders and their societies have had to survive. This can most generally be divided into a 'Fennoscandian experience,' a 'Russian experience,' and an 'Alaskan experience.' In Fennoscandia in general, and in Finnmark in particular, direct contact and early incorporation into the Fennoscandian states has provided the Saami reindeer herders with a long history in dealing with trade, taxation, imperialism, and, significantly, colonialism. While the social marginalization of the Finnmark (and other) Saami is a familiar experience, the incorporation of Sapmi into the lands of the

Fennoscandian states occurred very early, and many generations have coped through a spectrum of imposed governments. The Kola Saami, too, endured a long history of culture contacts with many nationalities and power-authorities, and a wide range of levels of political dominance, economic exploitation, and colonization. For these reasons, the dissonance between reindeer herding as a capital enterprise and as a subsistence activity in these areas, especially in Fennoscandia, is less pronounced than further east across Eurasia.

Among the Chukchi, historical contacts with nation-states have been much more recent--coupled with a severely limited economic infrastructure-- dissonance between the subsistence-driven and market-driven potentials of reindeer herding is more prevalent. As on the Kola Peninsula, Chukotka has been affected by resource extraction. Soviet economic interest in Chukotka by the Soviets led to severe social disruptions, as entire villages were forcibly abandoned and their populations relocated. Simultaneously, reindeer populations were increased to record levels, with considerable investment in mechanization, predator and wolf control, and delivery of fodder when pastures proved inadequate. These subsidies came to a sudden end with the demise of the Soviet Union, and the situation resulted in drastic reductions in scale and severe difficulties in delivering reindeer products to markets. This lack of access to markets, exacerbated by a series of icing events on the Chukotskii Peninsula, was the most important factor in the decline of reindeer herding in eastern Chukotka.

Such severe diminishment of scale has also been experienced by Iñupiaq reindeer herders in Alaska, particularly on the Seward Peninsula. Introduced at the end of the nineteenth century to alleviate starvation resulting from the shift in caribou migration routes, reindeer herding was partly intended as a subsistence activity, and remains so to some degree to this day. The marketing and distribution of reindeer products eventually came to eclipse its subsistence dimensions, however, and for a time herding was largely practiced as a market-driven enterprise, primarily in the guise of a dominant, monopolistic enterprise run by the Lomen brothers. This enterprise was oriented towards competing with and within the beef market, and thus led to a diminishment of Native herds. Earlier, Native herders had earlier mixed principles of market capitalism with subsistence production (Simon 1998: 235-237). Due to these situations, Iñupiaq reindeer herders have practiced reindeer herding as a capital enterprise from the outset, and have always combined market-orientation with subsistence-orientation. Of all the four case studies, it seems that a dissonance between reindeer herding as a capital enterprise and reindeer herding as a subsistence activity among the Iñupiat has been the least pronounced.

A REVIEW OF CASE-SPECIFIC FACTORS IN THE DIMINISHMENT OF THE SCALE OF REINDEER HERDING

Finnmark

Among the Saami of Finnmark and the Kola Peninsula, contact with the 'outside world' occurred earlier and more frequently than in the Bering Strait region. It also included a trade in surplus, or expropriation of non-surplus production by regional powers. The familiarity with capitalist economic institutions and the political incorporation of Saami areas into regional states, provided Saami herders with a longer period of experience of the organizational requirements and goals of capitalism. In the cases of the Kola Saami and the Chukchi, an extended period of socialism effectively removed them from the emerging global capitalist economy, thus permitting the modified maintenance of preexisting collective social organization. This collective model continues to serve as the basis for the organization of reindeer herding enterprises in the former Soviet Union but has proven to be best applied to situations of subsistence production.

In Finnmark wild reindeer are not a problem because there have been no wild reindeer in Finnmark since 1917. Domestic reindeer, however, number as many as 115,000 in Finnmark today. Small populations of wild reindeer, however, do survive in southern Norway. Saami reindeer herders have suffered comparatively slight decreases in reindeer populations in recent years but are experiencing a decline in

profits gained from meat, in part due to unpaid compensations for predator losses. Compensations nevertheless provide stability when approved and paid, and significantly offset the losses incurred by reported predation, especially by wolverines and golden eagles. Predator remuneration, however, is recognized as a contentious issue, and allegations of falsifications cannot be succinctly addressed here. In addition to the factors identified above, government pressure exists in Norway to limit the number of herders, thereby reducing herd sizes to lighten grazing demands on existing pastures.

In recent times, this situation has been increasingly averted in Finnmark and other Fennoscandian Saami areas, as is best illustrated by the assertion of Saami customary rights and the partially successful blocking of the construction of the Alta-Kautekeino hydroelectric dam project in Norway in the 1980's (cf. Paine 1983). Furthermore, Saami participation in regional trade has been active for many centuries. That trade is based primarily in the marketing of reindeer products, and reindeer herding in Fennoscandia is essentially limited to the Saami, forming an ethnic-based reindeer-oriented monopoly, albeit under government oversight. Even so, the profits generated are small when compared to the potential profits of heavy extractive exploitation (Beach 2000: 244).

In Finnmark, land and water rights remain unresolved, resulting in a diminishment of economic confidence, but political debate in Norway in general is ongoing. The Saami Assembly is attempting to secure the same usufruct rights as those of Norwegians in southern Norway, which

would end such discrimination in access to resources. Currently, Saami reindeer herders have only weak protections against encroachment by land owners, and no compensation is required if damage is not considerable. This goes against ordinary principles of Norwegian Law and the right to receive compensation for the expropriation of property by the state (Oskal 1999: 45).

Kola Peninsula

On the neighboring Kola Peninsula, herders have developed profitable meat production due to the presence of the Swedish slaughterhouse *Norfrys* and its European Union-certified quality standards. Low demand for reindeer meat in distant markets leads to high transport cost per unit, however. Additionally, reindeer herders on the Kola Peninsula have problems with poachers, especially from the military. The presence of only a few thousand wild reindeer would seem to make this threat slight, especially when compared to the Kola domesticated reindeer population of slightly less than 300,000 head. However, when wild reindeer cannot be found, domestic reindeer may become targets. These developments, coupled with the maintenance of basic *sovkhoz* structure, and by extent the *pogost/siida*, has provided relative stability.

The Saami of the Kola Peninsula are most concerned politically with establishing international linkage with Saami from other countries and currently participate in a number of international political forums.

Such connections allow for an effective expansion of potential markets, which has occurred on the Kola Peninsula with the arrival of *Norfrys*, a meat-processing company from Sweden with a slaughterhouse on the Kola Peninsula. Locally, however, increasing social problems, such as limited health care, non-payment of wages, alcoholism, violence, malnutrition, and hunger, are under-addressed by political authorities who are often themselves limited politically or economically in their power to act. Furthermore, since the Kola Saami are a minority in their own land, they are little represented in the regional government in Murmansk. According to Konstantinov (1997 and 2002b), conditions among the reindeer herders of the Kola Peninsula are similar to those in Chukotka, though improvements gained by an increase in economic activity and opportunity have begun to lessen the effects of social collapse.

One of the most important positive developments among the Saami in recent decades--and among the Kola Saami in recent years--is the development of transnational non-governmental organizations. Though the Kola Saami have not developed a state-oriented institution akin to the Saami Assemblies of Finland, Norway, and Sweden, they now participate in the Saami Council and receive advocation in concert with other Saami living outside Russia. The Saami Council is described by its leadership as a Fennoscandian-based non-governmental organizations has helped increase the rate of transnational contact with non-Russian Saami, and has led to economic contacts outside of Russia. Kola Saami participation in the Saami Council is coordinated through the Saami

Table 3. A Comparison of Factors Affecting the Diminishment of Reindeer Herding in the South Barents Shores Region.

Factors	Finnmark	Kola Peninsula
ECOLOGICAL		
caribou/wild reindeer	none present	some present (~7,000)
predators	some predation by lynx, eagles, with increasing claims	increasing predation, mainly by wolves
icings	rarely a problem (Spring nurseries)	rarely a problem
pasture	slowly decreasing with heavy loss	declining numbers/herds led to declining use; increased use by wild reindeer
number of reindeer	slowly decreasing (~115,000)	slowly decreasing (~300,000 (includes non-Saami herders on Kola Peninsula)
herd size	slowly decreasing	slowly decreasing
ECONOMIC		
meat profitability	gradual decrease in value	increasing value
antler profitability	n/a--no longer practiced	n/a--no longer practiced for market
other	slight increase in handicraft income though increasing imports from East Asia	losses from handicrafts/milk production
infrastructure	relatively well developed	fairly well developed
enterprises/operations	relatively steady in number	relatively steady in number
POLITICAL		
local management	husbandry unit/siida	brigade/enterprise
regional management	Reindeer Pasture Area Board/ Saami Assembly	Murmanskaya Oblast' Department of Agriculture
national management	Reindeer Husbandry Administration/ Saami Assembly	Ministry of Agriculture/Land Resources Committee--Russian Federation/ Reindeer Herders Union of Russia
int'l. organizations	Saami Council/Arctic Council	Arctic Council/Russian Association of Indigenous Peoples of the North
government subsidies	compensations provided for loss of reindeer and pasture	production grants/some transportation compensation
law	increasing attention to and consideration of Saami consideration of future customary law	regional normative-legal situation, but with special legislation
SOCIAL		
historical tradition	remains very strong	remains very strong
reproduction of herding knowledge	slow decrease likely as number of reindeer and herd size gradually decrease, and on-range contact is decreased	slow decrease likely as number of reindeer and herd size gradually decrease along with interest in reindeer herding

Association of Kola Peninsula and the Saami Association of Murmansk Region. By 1986, the Kola Saami had adopted the Saami Council's principle that the Saami are a single people, in spite of international borders, with rights of self-determination.

Chukotka

In Chukotka, by comparison, the most severe problems include the abuse of power, and the 159,000 or more wild reindeer that lure away many domesticated reindeer, resulting in a current herded population of approximately 85,000. This, along with a decrease in pasture usage, unprofitable meat production, and the crash of the antler market, have forced reindeer herders into a precarious position. Mandated farm reorganizations have been largely unsuccessful due to the lack of experience in managing private farms. Additionally, excessive demands for providing social welfare and taxes have been placed on farms or their products. Only through cooperatives, or similar collective organizations are herds viable. When these forms are used, coupled with the recent establishment of regular wages, conditions have improved.

In the former Soviet Union large-scale investment primarily benefited a political elite at the expense of local environmental conditions and indigenous rights. Often, local reindeer herding groups were developed as support structures for industrial concerns. As a result, herders and their families were relegated to an inferior socioeconomic status. Frequently, even this inequitable relationship is

abandoned when the desired resource is exhausted, rendering traditional economies isolated from both the core and the industrialized periphery (Schindler 1990: 160-161). This condition was seen to prevail in Chukotka during 1998 and continues to the present.

The primary concern of the government of Chukotka (and Russia in general) has been the transition to a sustainable free market capitalist-based economy. This has been difficult or impossible in some areas because necessary political institutions were lacking. The lack is largely a result of the perceived continuing legitimacy of authoritarian power based in former Soviet political structures. The continuance of these structures, including broad executive powers reaching down to the level of collective farms, and the maintenance of power through resource and information control, illustrate the endurance of older symbols of power legitimacy.

Furthermore, Chukotka has experienced a widening of the old Soviet, state-controlled, economic system, but with power-structures based on a feudal-like organization of personal loyalties, with power-sharing seemingly occurring on this basis alone (see further, Vedery 1996). Virtually all power seems concentrated at the top of a political-economic hierarchy (i.e., the governor and his supporters) where it is shared downward through a system of personal loyalty and the ability of those who govern to maintain personal controls over local and regional markets and resources. Though the current administration has initiated some economic relief, it continues to be managed within the system described above.

The political structure directly affects the economic situation in Chukotka where the control of the economy is deeply integrated into the political organization and its administration. The administrators of Chukotka's government control all social services and infrastructure in the *Okrug*, and since the governor administers this executive branch and is also the head of various business ventures in the region, he directly or indirectly controls most of Chukotka's capital, and therefore, its economy. All the means of production, then, with the notable exception of farm enterprises, are directly in the hands of the governing elite, which allows for the rise of monopolistic situations that hamper both competition and market exchange. However, even the proto-independence of the collectives cannot allow for their economic development now that their capital assets have been either frozen or seized by the directors for personal use and consumption or liquidated to aid in the survival of its members.

The tight political and economic control taken alone negatively impacts reindeer herding. The reindeer-herding farms of Chukotka, now officially in municipal control, have very little capital with which to grow or invest to foster growth. It also seems unlikely that the 'skeletal' farms that remain could ever successfully support themselves or their employees without significant state subsidies. These hypothetical state-subsidies, of course, present an ideological inconsistency with current Russian socioeconomic policies of privatization and reorganization. Because Chukotka is a peripheral supplier of raw materials, and because of former Soviet policies located villages and towns near the source of

raw materials, it should not be surprising that, with very little, highly concentrated, and quickly decaying infrastructure, a consumer-oriented market economy would likely fail.

The political-economic situation of reindeer herding in Chukotka poses an obvious problem for reindeer herders who, fully aware of state-induced overproduction during the Soviet period, have reduced their herds, and therefore their capital, and have consequently, if not intentionally, attained a more balanced ecosystem. This situation, coupled with restrictions on the movement of herds, causes Chukchi reindeer herds to be more susceptible to the region's erratic climatic conditions. The politically motivated problems presented above seemingly doom the economic viability of reindeer herding, considering the Chukotkan government's half-hearted attempt to initiate rational or effective market reforms.

So far, only the relative success of those reindeer farms which maintained an essentially collective organization have proven able to operate within the current political-economic system in Chukotka. This success serves to further legitimate former (i.e., Soviet) organizational structures, and reflects politically the widespread support for the communist party in this region of the Russian Federation. In Chukotka, then, old symbols of power legitimacy are being revived by the new elite under the guise of a new free market democracy, in spite of the failure of the implementation of effective economic or political reforms.

Seward Peninsula

On the neighboring Seward Peninsula, the primary economic concerns of reindeer herders are ecological. Generally, these focus on the relatively rapid movement of caribou from the northwest Arctic herd further west into the Seward Peninsula. A tremendous population of caribou, over 440,000, threaten existing reindeer herds, and have completely led away most of eleven reindeer herds. As a result, the steady decline in populations of domesticated reindeer has fallen to a current low of less than 10,000 (from a highpoint of 25,000 in 1990). The presence of widespread pasture is also a lure for caribou, who compete with reindeer for access.

The downturn of population, coupled with lower-than-normal snowfall, has caused disruptions in the herding and harvesting process and has led to the demise of entire herds. An important economic issue is the potential reconstitution of herds that have been led away by caribou, a likely necessity for the survival of reindeer herding on the Seward Peninsula. However, some participation in the antler market continues, unlike in Chukotka today, despite declining market values. Furthermore, the declining values in the market for reindeer meat contributes to high transportation costs, but there is potential for development of the reindeer industry through improvements in transportation infrastructure. This, along with access to local slaughterhouses with federal meat inspectors, would improve income from reindeer products.

Table 4. A Comparison of Factors Affecting the Diminishment of Reindeer Herding in the Bering Strait Peninsulas Region.

Factors	Chukotskii Peninsula	Seward Peninsula
ECOLOGICAL		
caribou (wild reindeer)	large numbers (~159,000: Chukotka)	many present (~440,000)
predators	wolves primary problem; also bears, wolverines, and lynxes	significant: wolves, bears, wolverines sometimes a problem
icings	a common problem	
pasture	unused pastures used by wild reindeer	competative access with caribou
number of reindeer	severe decrease (~85,000--Chukotka ~20,000--Chukotskii *Raion*)	severe decrease (~9,500)
herd size	severe decrease	severe decrease
ECONOMIC		
meat profitability	severe decrease in value	significant decrease in value
antler profitability	n/a (no longer practiced for marketing)	significant decrease in value
other	none relevant	decrease in blood/fur values
infrastructure	very undeveloped	limited development
enterprises/operations	severe decline, but stabilizing	steadily decreasing in number
POLITICAL		
local management	brigade/enterprise	permit areas accessed by reindeer herding family(ies)
regional management	Chukotka Autonomous Okrug Department of Agriculture	Kawerak, Inc./Reindeer Herders Association/State of Alaska
national management	Ministry of Agriculture/Land Resources Committee/ Reindeer Herders Union of Russia	Bureau of Land Management/ National Park Service
int'l. organizations	Arctic Council/Russian Association of Indigenous Peoples of the North	Arctic Council
government subsidies	production grants/some wage grants/ compensation	exclusively Native-only industry until 1998
law	regional normative-legal situation, but with special laws on reindeer husbandry and state support	village, state, and federal laws
SOCIAL		
historical tradition	remains very strong	strong among herding families, various degrees of interest or apathy among non-herders
reproduction of herding knowledge	slow decrease likely as number of reindeer and herd size decreased, along with reindeer herding opportunities	slow decrease likely as number of reindeer and herd size graduallydecrease along with herding opportunities

This potential has very recently been addressed in Alaska. The Alaska Department of Environmental Conservation created a voluntary reindeer slaughtering and processing inspection program in late 2003 to boost interest in marketing reindeer products. Currently in Alaska, to

sell reindeer meat nationwide, it must come from slaughtering and processing plants inspected by the United States Department of Agriculture. Without such inspections, reindeer meat cannot be sold to restaurants or national distributors, and may be distributed locally only under certain circumstances prescribed by state law (Howk 2003). In general, it seems that Alaska reindeer herders are supportive of this plan, which will enable an increase in market activity without jeopardizing subsistence aspects of reindeer herding.

GENERAL FACTORS OF THE DIMINISHMENT OF SCALE OF REINDEER HERDING

In general, the factors affecting the diminishing scale of reindeer herding in the circumpolar North can be grouped into ecological, economic, political, and social factors. While the case studies each exhibit unique conditions leading to the decrease, as detailed above, they share certain problems. These could be addressed at the national, international, or even transnational level, ideally in conjunction with governing powers so as not to disrupt existing, and sometimes tenuous, relations between the various economic-political cores and the reindeer herding peripheries.

One of the common problems shared by all is the predation upon reindeer by various wild animals such as wolves, golden eagles, bears, lynxes, and wolverines. While the losses incurred from such predation are slight compared with other problems, it nevertheless affects

sustainability, particularly in situations where herders cannot effectively control predators. The Norwegian government offers some compensation from predator loss, and the Alaska state government allows controlled hunting of predators In Russia, particularly in Chukotka, predators encounter little resistance from herders, who are hampered by material or political limitations.

Predation and compensations, along with case-specific factors, contributes to the decreasing numbers of reindeer and, consequentially, herd size, across the circumpolar North. Declining numbers and sizes of herds is a factor negatively impacting the trade-oriented aspect of reindeer herders in all four case studies. The market downturn is leading to a gradual, but steady, decrease in the reindeer herding opportunities for individuals within reindeer herding societies. However, a general interest in and identification with reindeer herding is seen to exists, at least among herders themselves, in all four cases.

The diminishment in the scale of reindeer herding in the circumpolar North has in part led to an overall decrease in the profitability of reindeer products, though in some cases there has been some increase in value in specific products. With limited or inaccessible markets for reindeer products--particularly the crash of the Asia antler-velvet market--there has been a marked reduction in the number of reindeer enterprises. While this has most affected those who are more peripheral to markets, some degree of stabilization is occurring. Generally, among the case studies, the Finnmark Saami seem to be situated in the most stable market conditions, followed by the Seward

Peninsula Iñupiat, the Kola Saami, and then the Chukchi. This ranking is directly linked to the political history of Norway, the United States, and Russia, and their accompanying historical disruptions, and the state of infrastructural development that facilitates processing, distribution, and marketing of reindeer products.

In all of the case studies, a combination of government-based regulatory bodies and reindeer herder non-governmental organizations exists at the national level. In all cases, too, some degree of cooperation and mutual acceptance of legitimacy has led to fruitful dialogue between the herders and political authorities. In part, this depends on the presence, or emerging presence, of the incorporation of customary law or reindeer herding-specific law in addition to normative state law. Most significant is the legitimacy placed on non-governmental organizations through their association with non-reindeer herding specific entities, including the Arctic Council, the Northern Regional Councils, and the United Nations, particularly through the draft legislation known as the Convention concerning Indigenous and Tribal Peoples in Independent Countries no. 169.

Politically, the main reason for the decline of herds is either abuse of power at the local level (as in Chukotka) or/and lack of understanding of the needs of reindeer herders and herds at the national level (as in the cases of Finnmark, the Kola Peninsula, and the Seward Peninsula). The issue of pasturage is as much a political as an ecological concern, and often, misappropriation of the pastures results in their loss by reindeer herders, or an inability to access them effectively. Especially if the

pastures ice-over, limiting access to pasturage, political controls on pasture access can be critical to enabling or preventing a circumvention of the icing problem. Through the creation and efforts of regional, national, and international reindeer herding organizations, political challenges have be addressed by an often international panel. These organizations, mentioned above and detailed in Chapter 6, are important in conveying reindeer herders' concerns to political authorities in all regions covered by the case studies.

Since dominant economic and political structures are codependent in the maintenance of power, the concerns of reindeer herders are often overlooked or ignored, thus compromising the sustainability of reindeer herding ecologically and economically. Among the contemporary reindeer herders of the circumpolar North, however, the twenty-first century is witnessing a revival of traditional native political structures and rights. This coincides with calls for the need for local autonomy. Managed at the local level, with a minimum of external demands or limitations, reindeer herding would witness a much more stable and sustainable future, assuming production for primarily subsistence needs.

The market for reindeer products is in decline universally, however. Some regions, such as those of the two Bering Strait peninsulas, have witnessed large or complete loss of production for market consumption, and infrastructural development severely limits distribution, especially in Chukotka. Future economic concerns include strategies on how to deal with the caribou/wild reindeer threat, but little support is being provided by government authorities. Some research into developing 'safe areas'

and tracking caribou herd movements through radio collars have proven moderately successful. Most needed, within considerations of reindeer herding as a market-oriented endeavor, is a further development of local and regional markets for the distribution and promotion of reindeer products, especially meat. This is further exacerbated by the limited market for reindeer products, and the increasing material (machinery) and fuel dependence. It seems evident, then, that reindeer herding as an economic process will take an ever-increasing variety of forms, from one household reindeer used exclusively for subsistence, to extensive herds intended solely for the production of reindeer products for the market.

A RECONSIDERATION OF GOALS AND THEORY

In this dissertation, I have utilized four case studies of contemporary reindeer herders to comparatively demonstrate the trends now occurring in reindeer herding economies. Through the identification of diminishment-inducing factors, and by placing these factors in their relevant historical and geopolitical contexts, I have shown why scales and rates of diminishment differ among the case studies. In all cases, reindeer herders have been drawn into the global economy, but they have met the challenge with varying degrees of success. I have shown that those who chose, or were permitted to maintain, indigenous social organization have generally fared better than those who were forced or obliged to accept systems of organization from encompassing polities.

Similarly, herders who have either more experience operating under market principles, have fared better in regional and global markets. These have provided local economic stability and a greater degree of 'legitimacy' in the perception of dominant sociopolitical elites and structures. Involvement in the global economy, at least to some degree, is inevitable, and some reindeer herding populations, notably the Saami, have obtained sustainability through a hybridization of the economic goals of subsistence and involvement in local, regional, national, and international markets. I have also shown how critically dependent reindeer herders are on existing infrastructures which facilitate the processing, distribution, and marketing of reindeer products.

Nonetheless, reindeer herding is, fundamentally, a domestic mode of production within the capitalist world system. It is from this 'level' of production that reindeer products, and the capacity to acquire these products, are created in each of the case studies. The excess production can then be sold as a market based commodity, assuming the necessary distribution and marketing infrastructures are in place. Nevertheless, within the global economy, the viability of reindeer herding beyond production for subsistence is heavily dependent on external markets and infrastructural connections to those markets. In this way, as a peripheral supplier of materials to at least regional cores, reindeer herding is undeniable involved in the world-system of global capitalism. The historical interactions of pastoralists with other societies can be considered in a world-system approach (or any global or even regional approach), and is arguably necessary to fully understand the economic

ramifications of such an involvement in a regionally or globally integrated system.

Additionally, among reindeer herders a process of globalization is universally present in the contemporary world, and reindeer herders are integrated into the modern world-system. While many reindeer herding populations retain their indigenous language and culture, most have been heavily impacted by the overarching culture(s) of the nation-state(s) within which they dwell. However, even in areas where indigenous practices are most heavily supplanted due to globalization, a hybridization, rather than a replacement, of culture has occurred. Again, this applies to all four case studies. Reindeer herders are undergoing a transformation that is based in the establishment of a capitalist world-system, bolstered by industrial agriculture and, as the dominant economic form, came to affect all people, everywhere, though to differing degrees.

One fruitful method in understanding the sustainability of reindeer herding as a capital-based enterprise is through the use of new institutional economic approaches, modified in this dissertation as "new institutionalism." Through the identification of institutions utilized by reindeer herders in their involvement in local, regional, national, and international markets, it is possible to better understand how transactions are facilitated at various levels of the markets for reindeer products. This economic action exists alongside an ongoing production for subsistence, and among reindeer herders in all four case studies, a

combination of market transactions, informal exchange, and subsistence production and consumption exists simultaneously.

In the future, it seems, the maintenance and creation of new institutions, which ostensibly can moderate transaction costs and promote maximization, will continue as increasing familiarity with market processes is gained. This must occur, however, in conjunction with a sustainable subsistence economy which can provide for internal material needs. If not, reindeer herding as a subsistence activity could be replaced by the full commodification of reindeer products, produced by ranch-like enterprises within which indigenous methods of reindeer herding are lost. Further implications in this process include an increasing reliance by reindeer herders on the state, as individuals formerly involved in or supported by reindeer herding depart the industry. This would accompany a loss of herding knowledge as its reproduction across generation wanes.

Comparative research on the diminishment of the scale of reindeer herding enables the identification of specific factors that induce decline. These have been discussed in detail throughout this dissertation. In particular, however, comparative analysis revealed insightful information concerning the degree of influence each factor had on each of the four case studies. While the limitations imposed by the disparate access to comparative data proved challenging, it was nevertheless possible to isolate factors relevant to each case study, ranging from herd populations to infrastructural development to contemporary and past political structures. Using a comparative method to reveal the factors

inducing decline in each of the case studies, however, was complimented by the ethnographic peculiarities and details obtained through anthropological research and field work. Essentially, sociocultural considerations of comparative factors concerning the diminishment of scale of contemporary reindeer herding provided qualifying context to the information revealed through comparison.

THE FUTURE OF REINDEER HERDING

It is evident that reindeer herding as a capital-based agricultural enterprise within the global economy faces severe challenges and limitations. With an increasing reliance on mechanization comes an increasing reliance on the market economy, and the most direct method for reindeer herders to participate in the market economy is through their reindeer products. Alternatively, less reliance on mechanization and participation in the market economy would allow for smaller scale, more sustainable reindeer herding operations. These two dissonant situations have led to the disruption of reindeer herding as a sustainable economy. Seemingly, then, reindeer herding must reckon with the dual orientation of production, serving local subsistence needs while enabling access to the markets of global capitalism.

In Finnmark, this situation has been partially realized through the increasing protections provided in part through the legal formalization of customary law. This, coupled with a well developed transportation infrastructure and a comparatively large existing market for reindeer

products, enables the effective involvement in market sales of reindeer products. Furthermore, the Saami have had the opportunity to take the lead in the development of pseudo- and non-governmental organizations. It is expected that the Saami will continue in their leadership roles as advocates of increasing autonomy and market participation, ideally allowing for the continuation of indigenous institutions among themselves. It is likely that the gradual process of national legal respect of customary law in Finnmark/Norway/Fennoscandia will facilitate this dual-orientation of the reindeer herding economy of the Saami,

The Saami of the Kola Peninsula, largely through their association with and advocacy by the Fennoscandian Saami, will also likely more successfully involve themselves in reindeer-product market activities. Already, this association has helped to bring about Fennoscandian involvement in the processing of reindeer meat, and through value-adding techniques and maintenance of quality standards, new European Union markets have become accessible. This process of increasing market activity by the Kola Saami is expected to increase. This is particularly critical among the Kola Saami, since the reproduction of herding knowledge has been compromised by the lack of opportunities which accompanied the transition of the Soviet Union into the Russian Federation. In all Saami areas, however, the cultural viability of reindeer herding seems secure.

While the same can be said of the cultural viability of reindeer herding among the Chukchi, the development of market-oriented production is minimal. The severe decreases in numbers of reindeer and

herds following the demise of the Soviet Union severely limited the viability of reindeer herding as a capital enterprise in Chukotka. This, coupled with a severely limited and poorly maintained transportation and marketing infrastructure has provided only the most marginal market-oriented opportunities. It is expected that market-oriented development in Chukotka will continue at a slow pace, but the cultural importance of reindeer herding among reindeer herding Chukchi is highly significant, and it will likely survive as a subsistence- and local-market-oriented endeavor. With significant infrastructural investment, however, and a stable, non-exploitive political setting, reindeer herding could become a viable market enterprise. Such development, if desired, must occur in conjunction with a vastly increased control over the significant number of caribou/wild reindeer that have moved into Chukotka.

Perhaps the most significant factor affecting the future of reindeer herding in the Seward Peninsula is the incursion of caribou into reindeer herding areas. This is due to the return of caribou in very high numbers to the Seward Peninsula. This situation is exacerbated by the fact that the cultural viability of reindeer herding on the Seward Peninsula may significantly decrease during the time of large-scale caribou migration into the area. If, however, reindeer herding can be maintained by those few families still actively involved, reindeer herding may survive on the Seward Peninsula. Presumably, the fluctuating migratory routes of caribou/wild reindeer in both western Alaska and Chukotka, will shift favorably away from pasture used as reindeer grazing areas. In Alaska, furthermore, with positive governmental and academic interests, and

with a great potential market for consumption, reindeer herding on the Seward Peninsula can certainly survive. This is also largely dependent on the willingness and desire of Iñupiaq herders to continue reindeer herding, in spite of the presence of a large, essentially equivalent and equally accessible resource in the form of caribou.

SUMMARY

The problems facing reindeer herding today are a combination of social and ecological factors, though many of the ecological issues are tied to economics and politics. Overall, reindeer herding in the circumpolar North will likely survive, though in a scaled-back form, primarily as a supplier of subsistence needs and those of local and regional markets. In areas where it is supported, economic infrastructural development, such as the decrease of transportation costs and the local establishment of slaughterhouses, coupled with value-adding techniques, would boost demand for reindeer products.

The many continuing connections between older, indigenous reindeer herding institutions and contemporary institutions displays the relative, and unequal, impact endured from their incorporation into the nation-state to, eventually, the global economy. Herders who retained traditional social organization in some form, such as the Saami of Finnmark and the Kola Peninsula, have been more successful at continuing reindeer herding, both for subsistence and for commerce.

While reindeer herding in Finnmark and the Kola Peninsula is relatively stable, with at least minimally sufficient existing infrastructure, its primary threats are the loss of pasturage and absence of agreement of proprietary or usufruct issues between reindeer herders and national governments. In Chukotka, where the situation is most dire, there has been some improvement, primarily in the living conditions of the herders themselves. Lacking development of at least the transportation infrastructure, reindeer herding will likely come to serve only subsistence needs or local markets. The conditions on the Seward Peninsula, while optimal for reindeer, are also unfortunately optimal for caribou, and without some controls over contacts between the two, continued declines are likely.

Overall, then, the most widespread threat to reindeer herding and one of the major factors in its decline has been the diminution of pasture to caribou/wild reindeer, agricultural, industrial, or military interests. This decline in pasture seems to be nearly universal among reindeer herders, but the problem of caribou/wild reindeer is not. Primarily affecting Alaska and the easternmost regions of Eurasia, caribou/wild reindeer herds often outnumber domestic reindeer herds and outcompete them for pasture or/and lead them away from the domesticated herd. Therefore, the ecological threats to reindeer herding are significant, especially in the Bering Strait peninsulas.

So, within the entire Northern context, the main factors of decline include an insufficient infrastructure to support reindeer herding as a capital-based enterprise and the incompatibility between the processual

requirements of reindeer herding and the organizational requirements of industrial agriculture within the global market. This lack of infrastructure limits the efficiency of production and distribution in all cases, but especially among the Chukchi and Iñupiaq herders on both sides of the Bering Strait. Furthermore, reindeer herding requires regular access to large tracts of pasture, though these are usually isolated from existing transportation or processing infrastructures. Additionally, the global-capitalist economy encourages overproduction for the purpose of creating marketable surpluses, a condition which has reportedly led to overgrazing in some areas, particularly in Finnmark.

The continued sustainability of reindeer herding in the contemporary world is tenuous. A number of measures could be taken to offset this uncertain future. Such initiatives must include both political and economic adjustments, within a context of continuing ecological viability. Perhaps most importantly, reindeer herders and the state and industry must maintain dialogue to enable compromise or consensus on contentious issues. The ongoing exchange of information concerning reindeer herding between scholars and herders must be espoused to gain a more complete perspective of relevant problems. This, in turn, facilitates communication with governments, potentially leading to additional legal protections for reindeer herders and their lifeways. Finally, under conditions of climate change and pollution, manipulation of herd sizes and exploitation of reindeer resources must be maintained at sustainable levels. Whether as a subsistence economic strategy or as a private capital-based agricultural enterprise, and likely as a

hybridization of both, reindeer herding seems capable of avoiding a total demise. As a combination of local social organization, local and regional ecological conditions, subsistence production, and institutions imposed from the outside, however, reindeer herding's future as a capital-based agricultural enterprise can be called into question for all four case studies.

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